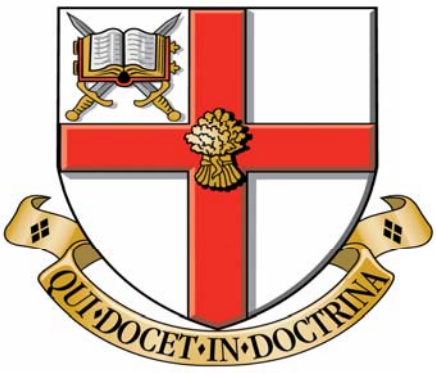

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A STUDY INVESTIGATING THE EFFECTS OF THE PATHS (PROMOTING ALTERNATIVE THINKING STRATEGIES) CURRICULUM ON THE CHILD'S EMOTIONAL AND BEHAVIOURAL DEVELOPMENT AS PERCEIVED BY THE CHILD'S CLASS TEACHER

Dianne Cairns

Dissertation submitted to the University of Liverpool for the Degree of Masters of Arts (Counselling Studies) in part fulfilment of the Modular Programme in "Counselling Studies."

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Abstract

Recent reports detail the growing concern of mental health difficulties among children and adolescents (DfES 2001, NAfW Everybody's Business, 2001). Schools are considered an ideal location for the prevention, early identification and treatment of children's difficulties. Increasingly schools are using counsellors to help work with children with emotional and behavioural difficulties. However, there is limited information around the effectiveness of school-based interventions. The PATHS (Promoting Alternative Thinking Strategies), (Greenberg & Kusche, 1994) Curriculum is a comprehensive programme for promoting emotional and social competencies and reducing aggression and behaviour problems in primary school-aged children. Designed to be delivered by class teachers to primary school aged children, evaluations have demonstrated significant improvements in children's emotional and behavioural development on a variety of sites in America but to date, to the author's knowledge, there is no published research in the UK. This study examines the short-term effectiveness of the PATHS curriculum as perceived by the child's class teacher. The study is a pre and post intervention study comprising of 5 schools, 13 teachers and 313 children. The authors of PATHS advise delivery of the programme to be at least 2-3 times per week, throughout the child's primary school education. The majority of the teachers in this study were only able to deliver the programme once a week, and the intervention period was brief, (October 2001- July 2002). However, despite these limitations, the findings indicate improvements on teacher ratings of emotional awareness, behavioural difficulties, peer relationships and children's self esteem. The results are discussed in terms of the efficacy of the measures, the limitations of the study and the implications for teachers, counsellors and future research.

The work is original and has not been submitted previously in support of any qualification or course

Signed

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List of Abbreviations

C.A.M.H.	Child and Adolescent Mental Health Service
C.R.R.P.G.	Conduct Problems Prevention Research Group
D.f.E.S.	Department for Education and Skills
F.P.C.S.C.	Flintshire Primary Care Service for Children
H.A.S.	Health Advisory Service
L.E.A.	Local Education Authority
N.A.f.W.	National Assembly for Wales
N.H.S.	National Health Service
P.A.T.H.S.	Promoting Alternative Thinking Strategies
P.S.E.	Personal and Social Education
S.D.Q.	Strength and Difficulties Questionnaire
T.C.R.	Teacher Concern Rating
T.P.R.	Teacher Perception Rating

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Chapter 1 Introduction

1.1 Background to current study

The Health Advisory Service (HAS) report, Child and Adolescent Mental Health Services: Together We Stand (NHS/HAS, 1995) recommended that Health Authorities and Local Authorities should identify, strengthen and support primary care or community based child and adolescent mental health services. As a direct result of these recommendations and wider literature on early intervention and prevention of child and adolescent mental health (CAMH) problems, the Flintshire Primary Care Service for Children (FPCSC) was established. Following a local needs assessment (FPCSC 1999; Davis et al., 1997) an evidence-based package of interventions began in April 1998 within a defined population in North Wales (Cairns & Appleton, 1998; Appleton & Hammond-Rowley, 2000). One of these interventions, a classroom based universal intervention, The PATHS Curriculum (Promoting Alternative THinking Strategies), (Greenberg & Kusche, 1994 *Appendix 1*) was provided to all primary schools in the area. However, whilst there exists a wealth of evidence for the effectiveness of PATHS in America, as yet, to the author's knowledge, there is no evidence of its usefulness in mainstream schools in England or Wales. *The current study aims to investigate the short-term effects (if any) of the PATHS curriculum on children's emotional and behavioural development as perceived by the child's class teacher. The study will also inform the continued development of PATHS in North Wales, and will serve as a pilot for future, more comprehensive research.*

1.2 Child Mental Health

Child mental health problems can be defined as difficulties involving emotions or behaviours (or both) that interfere with a child's development, social relationships or ability to learn (Verhulst & Koot, 1995). Within the child mental health literature a differentiation is often

made between externalising problems, e.g. aggression, destructiveness, inattention and internalising problems, e.g. anxiety, withdrawn behaviour and depression (Achenbach & Edelbrock, 1978). A robust and stable finding in the literature relates to the distinction between boys and girls in the presentation of externalising and internalising problems, with boys presenting with more aggression and conduct problems and girls displaying more depression and anxiety related difficulties (Rutter, 1987). Epidemiological studies also suggest an overlap between externalisation and internalisation with high rates of co-morbidity, which make it difficult to isolate (and therefore treat) different groups of children with particular problems (Verhulst et al., 1992). A recent report commissioned by the Department for Education and Skills (DfES, 2001) highlighted the interconnection and overlap between 'externalised' behavioural difficulties and 'internalised' emotional difficulties and stressed the importance of interventions that pay attention to the educational, emotional, social and behavioural needs of the child. It will be illustrated later in the text that the PATHS curriculum addresses all of these areas.

1.2.1 Risk and Resilience

A range of factors exist which serve to increase the likelihood of children developing mental health difficulties; these are generally termed risk factors and resilience factors (Rutter 1987, Coie et al. in Greenberg 1999). Risk factors are those, which increase the probability of a child developing a mental health problem. Risk factors can exist within the individual child, their family or the community, and can be biological or psycho-social (DfES, 2001). Risk factors are usually cumulative: the greater the number of risks, and the more severe the risks, the greater the likelihood of the child developing a mental health problem (Rutter, 1987). Coie et al. (in Greenberg et al., 1999) grouped empirically derived, generic risk factors into seven individual and environmental domains, where risk factors, which impact on the child, are grouped together to include:

school problems - demoralization and school failure

family - overt parental conflict, inconsistent discipline, poor attachment, parental mental health problems and parental abuse

emotional risk factors - low self-esteem, emotional immaturity, emotional dysregulation

interpersonal problems - peer rejection, alienation and isolation

constitutional factors - sensory disabilities, organic handicaps

skill development delays - low intelligence, social incompetence, attention deficits, reading disabilities, and poor work skills

ecological - neighbourhood disorganization, racial injustice, unemployment and extreme poverty.

Theory and research support a number of observations about the associations between these risk factors and the development of behavioural difficulties. Firstly, development is complex; therefore it is unlikely that there is a single cause or risk factor for any disorder; consequently it is unlikely that children's emotional and behavioural difficulties could be eliminated by individual treatment alone (Rutter, 1982). Additionally, there are multiple pathways to most psychological disorders, that is, different combinations of risk factors may lead to the same disorder and no single cause may be sufficient to produce a specific negative outcome (Greenberg et al., 1993). In addition, risk factors occur not only at individual or family levels, but also at all levels within the ecological model (Kellam in Greenberg et al., 1999). Interventions therefore need to account for the different levels (Offord et al., 1998). Protective factors are 'variables that reduce the likelihood of maladaptive outcomes under conditions of risk' (Greenberg et al., 1999). Greenberg et al. (ibid) consider three broad domains of protective factors. The first domain includes characteristics of the individual such as cognitive skills, social-cognitive skills, temperamental characteristics, positive self-esteem and self-efficacy (Luthar & Zigler in Greenberg, 1999). The second domain includes the

quality of the child's interactions with the environment. These interactions include secure attachments to parents (Morissett et al. in Greenberg 1999) and attachments to peers or other adults who engage in positive health behaviours. A third protective domain involves aspects of the 'mesosystem' and 'exosystem' (Bronfenbrenner, 1992) such as school-home relations and quality schools. Similar to risk factors, some protective factors may be more 'malleable' and thus, more effective targets for prevention.

In summary, as the number of risk factors increases so does the need for more protective factors to act as a counter-balance (Rutter, 1987). Interventions which can promote resilience and reduce risk factors and which include individual as well as ecological aspects are more likely to succeed in promoting positive mental health and reducing the likelihood of long term, severe emotional and behavioural difficulties (Dryfoos, 1990).

1.3 Rationale

1.3.1 Child and Adolescent Mental Health Services

Working therapeutically with children has historically been through the child guidance movement. This began in America in the 1920's and then spread to other countries including Britain. It was initially driven by the psychoanalytical idea that psychopathology in adults had its origin in the arrested psychosexual development during childhood. If this could be treated or prevented during early childhood then children would grow up free of mental illness. The 'treatment' however often consisted of completing a battery of psychometric tests followed by individual 'confessional' conversations with a psychoanalyst, the result being that few children remained in therapy and the long term effects were negligible (Rutter et al., 1984; Caplan, 1964). Another criticism of traditional child guidance clinics was that insufficient attention had been given to the child's wider network and social systems:

> the child guidance clinic, the linchpin of the child guidance service is an expensive, ineffective and wrongly conceived institution ...Its clinical orientation causes only minor regard to...the school, the teacher and the classroom.
>
> (Tizard in Lane & Miller, 1992 p.11)

Taking children 'away' to be treated has the added difficulty in that schools are no further forward in identifying, preventing or managing future concerns:

> ...the solution to a single child's problematic behaviour or their learning difficulty, for instance, by their removal or cure, leaves the school no better equipped to deal with the next problem, except by calling for the same solution.
>
> (Dowling & Osborne 1994 p.59)

The disillusionment with traditional child guidance techniques led to the introduction of Child and Adolescent Mental Health Services (CAMHS) where other forms of 'treatment' therapy, including play therapy, behaviour therapy, family therapy and group therapy were developed. However, despite the success of these approaches recent findings suggest that at any one time a quarter of children and adolescents are experiencing significant mental health problems (Verhulst, 1995) and of these only a small proportion manage to access CAMH services. The frequent criticism of "too little, too late, for too few" is apparently justifiable (Advisory Committee on Children's Services cited in Peter's and McMahon, 1996). There has been a growing acknowledgement therefore that there is a need for early intervention and prevention programmes which can address a larger proportion of the population. A meta-analysis conducted by Durlak and Wells (1997) concludes that outcome data on the effectiveness of prevention programmes show significant effects. Similarly Greenberg et al. (1999) in their review of the effectiveness of prevention programmes, include the following in their summary:

> Preventive interventions are best directed at risk and protective factors rather than at categorical problem behaviours...
> Interventions should be aimed at multiple domains, changing institutions and environments as well as individuals...
> Prevention programs that focus independently on the child are not as effective as those that simultaneously "educate" the child and in still positive changes across both the school and home environments.
>
> (Greenberg et al., 1999, p.37)

The PATHS curriculum is an example of a universal (delivered to all children) preventive programme designed to promote social/emotional competence and reduce behavioural difficulties. Targeted at both risk and resilience factors, PATHS integrates affect, behaviour and cognitive understanding by facilitating i) self-control, ii) emotional awareness, iii) positive self–esteem, iv) healthy peer relations and v) social problem-solving skills. Designed to be used by teachers in mainstream and special needs schools PATHS seeks to educate the individual but also contains components which target improvements in classroom and school ecology. Through generalisation procedures and the encouragement of parental participation PATHS aims to improve relationships between home and school and provide support and reinforcement to children from peers, family and other community members.

1.3.2 The 'Population Burden'

Precise data on the prevalence of children's mental health problems and disorders is unavailable (NAfW, 2001), however the Advisory Group to the National Assembly for Wales estimated that more than 40% of young people have recognizable risk factors, between 30% and 40% may at some time experience a disorder, and up to 25% may have a disorder. These figures are comparable to those detailed in the HAS report (1995) which states that in a population of 250,000 of which 20-25% is aged between 0 to 18 it is expected that between 5,000 and 12,000 will have a mental health problem or psychiatric disorder at any one time. Levels of problems have been found to be demographically linked (Rutter, 1987) and highly correlated with deprivation (NHS/HAS, 1995). Additionally there is increasing epidemiological evidence to suggest that the prevalence of mental health problems in childhood and adolescents is increasing (NHS/HAS 1995; Greenberg et al., 1999).

Children with mental health problems not only suffer individually, but their difficulties often adversely affect their relationships with peers, teachers and parents, their school performance

and social functioning (Offord et al., 1989). Children with conduct disorder are at an increased risk of alcohol and drug misuse (Boyle et al., 1992). CAMH problems have been shown to be a risk factor for adult psychiatric disorders (Institute of Medicine, 1994) and almost half of all clinically identified antisocial young people become antisocial adults (Offord, 1996). The costs of children's emotional and behavioural problems are extensive; they include financial costs in terms of loss of earnings (to the family and society), educational, police, social care and NHS costs (Offord 1996; Reid et al., 1997). Thus CAMH problems place a high cost or burden on the population; early intervention and prevention programmes have the potential to reduce the overall burden on society (Greenberg et al.1999, Offord 1996). Other objectives of early intervention include the reduction in self-injurious behaviours and suicide attempts and the reduction of violence especially in adolescents (NHS/HAS, 1995).

1.3.3 The influence of school

Teachers, next to parents, have the most contact and potentially are the most influential adults in a school-aged child (Dowling & Osborne, 1994); along with other primary professionals they deal with the majority of child and adolescent problems. However their training is often insufficient and on-going support from specialist professionals is negligible (Palazzoli, 1999). Recently reports on children's services stress the importance of the school in promoting children's positive mental health and reducing the impact of emotional and behavioural difficulties in the child (DfES 2001; NAfW 2001).

> A multi-faceted programme is likely to be most effective, combining a classroom programme with changes to school ethos and school environment alongside family/community involvement.
>
> (NAfW, 2001 p.58)

Interventions that occur in the normal environment of the child are more likely to benefit the child in the long term than interventions which take place outside the child's natural environment such as a clinic. Also, interventions which in their very nature themselves

promote a therapeutic pro-social atmosphere in the school have the added advantage in reducing the chances of children being negatively influenced by anti-social aggressive behaviours (Bierman & Greenberg, 1996). Other advantages to school-based interventions include the ability to individualise the activities, the reduction of stigmatisation, the promotion of positive peer interactions, improved relationships between teachers and students, and the ability to generalise techniques and strategies (Evans, 1999). Citing research into the effectiveness of school based programmes in America, Goleman states:

> The results are highly encouraging: children not only get better at self-management and handling relationships, but the number of fights and violent incidents decline.
> (Goleman 1999, p.136)

Goleman goes on to say that he predicts that one day all children will have access to such programmes and that "empathy will hold as valued a place as algebra" (p.137). Whilst there exists obvious advantages to school-based universal interventions, Offord (1996) questions the effectiveness of universal approaches compared with targeted (indicated or selective) approaches. A potential disadvantage of universal programs is that, based on the relatively low prevalence of psychopathology among children, considerable time and effort could be spent on children who may not otherwise have developed mental health problems. In addition, because of the relatively low dosage provided by most universal interventions, they may be insufficient in content to alter developmental pathways of children already at significant risk for psychopathology (Offord, 1996). Durlak (1995) challenges this, maintaining the long-term benefits of universal interventions outweigh the possibility that only a few children might benefit from them.

1.3.4 The Role of Counselling and Early Intervention/Prevention in Schools

In their paper 'Counselling in the United Kingdom past, present and future', distinguished counselling writers Dryden, Mearns and Thorne (2000) suggest the time is now right, in British schools, for trained counsellors to be working closely with teachers on areas around

'personal health and social education'. Criticising the traditional role of the school counsellor in the 1960's and 1970's, who worked with relatively small numbers and in isolation, Dryden et al. suggest new roles for trained counsellors. These could include 'in house' teacher training, support with curriculum development and introducing school-based programmes. Citing her own research and the work of Black and William, Colleen McLaughlin considers the interconnectedness of counselling and schools:

> The process of counselling which emphasises the importance of developing good relationships based on trust, respect and listening are what students want...The evidence seems to be that we need to develop the role skills and pedagogy of counselling, not to restrict it. The needs of young people in the context of a personally and socially complex society... require us to develop and integrate counselling theory and skills into the role of all teachers.
>
> (McLaughlin, 1999 p. 21)

Thus, as a study undertaken towards a Counselling M.A, the connections between counselling and this study include the following:

- As a trained counsellor and qualified primary school teacher the writer will be working with teachers in delivering a school-based social skills programme, and in so doing supporting them in the psychological education of their pupils (Dryden et al. 1999; Goleman, 1999).
- Early intervention has the potential for a reduction in referrals to adult mental health and counselling services (Offord et al., 1989).
- The writer will be offering an insight into school-based programmes which can be beneficial to school-based counsellors (Dryden et al., 1999).
- The writer will demonstrate how counselling theory and skills can be integrated into the role of teachers (McLaughlin, 1999).

1.4 Overview of the Study

This study aims to examine the effectiveness of The PATHS Curriculum (Appendix 1) on the child's emotional and behavioural development as perceived by the child's class teacher. The

study involves 313 children and 13 teachers in 5 different primary schools in a small county in North Wales. Teachers delivered the PATHS lessons as part of their personal and social education curriculum (PSE), on average once a week for the period of the intervention, October 2001-July 2002. The Strengths and Difficulties Questionnaire (SDQ: Goodman 1997), and the Teacher Concern Rating (FPCSC, 1999) were completed by the class teacher on each child pre and post intervention. Teachers completed the Teacher Perception Questionnaire post-intervention only (Fast Track, 1995)

1.4.1 Hypotheses

- Children will show overall improvement on the Strengths and Difficulties Questionnaire (SDQ: Goodman, 1997), thus children who are rated as 'borderline' or 'clinical' on the SDQ by teachers pre-intervention will be rated as improved by teachers post-intervention.

- Children will show improvement on the prosocial sub scale on the SDQ (i.e. the scores will increase). Children will also show improvement on the SDQ hyperactivity, emotional symptoms, conduct problems and peer problem subscales (i.e. scores will be lower).

- The number of children rated, as having 'some' concern or 'definite' concern as rated on the Teacher Concern Rating will be reduced.

- The teacher's perception of the effect of PATHS on children's emotional and behavioural development will show overall improvement on the Teacher Perception Rating.

Chapter 2 Literature Review

2.1 Overview

The literature search primarily focussed on counselling books and journals and child psychology journals accessed via psychinfo and ovid databases and google and alta vista search engines. Chester college library computerised catalogue was also used to access previous dissertations and studies. Meta-analyses conducted by Durlak and Wells (1997) and a comprehensive report of Mental Health Programmes (Greenberg, 1999) were also used. The latter was accessed via the website http://www.prevention.psu.edu./ Words used in the searches include 'counselling', 'child mental health', 'child psychology', 'prevention', 'universal programme', 'emotional and behavioural development' and 'primary school based interventions'.

The literature review connects some of the main areas of counselling theory to children's emotional and behavioural development in general and the influence of school in particular. The PATHS curriculum is one example of an evidence based universal prevention programme that aims to integrate sound theoretical principles with school-based practice. The interconnection between the theoretical models of counselling and the PATHS curriculum will be explored in detail. Other studies of school-based prevention programmes will also be discussed.

Traditionally within the field of counselling, explanations of a child's emotional and behavioural development can be found in three main schools of psychology - humanistic, behaviourist and psychodynamic, with more recent explanations taking account of the person's ecology and therefore including systemic thinking. For the purpose of this review the literature is grouped into the above headings, yet recognising that the practical

implications of the theoretical models overlap considerably. The authors of PATHS for example consider some of the long-range goals of psychodynamic education as developing a positive sense of self, healthy internal motivation and respect for self and others (Greenberg et al., 1998). The writer, a person-centred counsellor, could equally place these in long-range goals of humanistic education!

2.2 Psychodynamic Model

The psychodynamic model encompasses a variety of orientations (Bowlby 1953, Erickson 1968) with Freud as the founder. Psychodynamic theory generally locates the origins of the child's development in the quality of early attachments and early life experiences. Of particular relevance to working with children, is the work of the object-relations theorists who have emphasised the drive of the individual to seek relationships. Its implications for teachers include the importance of the quality of the child's relationships, (Winnicott, 1964) the promotion of self-awareness including emotional awareness (Goleman, 1996) and the internalisation of self-control and self-responsibility (Greenberg et al., 1998).

2.2.1 Relationships ~ Teachers

The ability to make and maintain relationships is generally accepted as central to good mental health. Positive relationships with others are essential pre-requisites to our sense of well being, feeling loved and belonging (Maslow, 1970). Research has consistently indicated that the quality of staff-student relationships is a key factor in children's emotional and cognitive development. A review of twelve sets of classroom research showed that better achievement on a variety of outcomes including affect is associated with 'high levels of cohesiveness' and 'less social friction' (Haertel, et al. in Weare 2000). Similarly in a review of twenty-four international studies, Wubbels et al. in Weare (2000) discovered that children enjoy learning, are more motivated and achieve better results if the teachers are friendly, helpful and

understanding. Cooper (1994) and his team in a study of pupils' perceptions of staff-pupil relationships found successful schools were characterised by students believing staff to be caring, prepared to listen and be sympathetic towards them in an atmosphere of mutual trust (Cooper et al., 1994). In addition to demonstrating warmth, acceptance and understanding Weare (2000) considers 'active listening' an essential communication skill which needs to be taught in schools:

> Active listening is so central to the promotion of mental, emotional and social health, [that it] is essential for all teachers and students to acquire.
>
> (Weare 2000, p 90)

In addition to promoting positive relations and therefore encouraging positive emotional and behavioural development, active listening has a central role in conflict resolution, managing anger and addressing bullying (Olweus, 1997). Visser and Cole (1999) believe the young person needs to feel looked after and educated by trustworthy, empathic adults who are willing to make personal sacrifices on the child's behalf, people who are human and forgiving, yet demanding in terms of the expectations of the child because they believe in the child's innate potential. Thus teacher qualities and positive staff student relationships can have a protective influence on children in that they promote resilience and act as a 'buffer' to potential risk factors. Conversely schools which are unsupportive and have unhealthy relationships have been shown to add to the child's risk factors and increase the child's likelihood of displaying emotional problems and behavioural difficulties (Rutter, 1979).

2.2.2 Relationships ~ Peers

As children grow older the influence of their peers grows stronger (Erikson, 1968). The need to feel accepted, included and valued by friends overrides the child's need to be accepted by the adult (Erikson, 1977). Schools are in the ideal position to promote positive peer interactions to the benefit of the child's emotional and behavioural development or to create situations in which individuals become isolated and dysfunctional. Poor peer relations are

often the primary reason why children are referred for therapy (Rutter, 1979) and are linked with maladjustment in later life. A number of different strategies have been devised to promote positive peer interaction. These include peer mentoring (Kay & Webb, 1996 in Weare 2000) peer counselling (James et al., 1991) and peer coping programmes (Blechman in Greenberg et al., 1999). From a psychodynamic perspective the importance of utilising the child's natural friendship group through play, drama and group work, in addition to providing a cooperative learning environment, have been proven to correlate highly with improved peer relationships, enhanced self esteem, and improved academic performance (Dowling & Osborne, 1985).

2.2.3 Emotional Literacy

The ability to understand him/herself is at the core of psychodynamic thinking (Greenberg et al., 1998). The key to this self-awareness is through the recognition and management of our emotions, which in turn facilitates self-control and behavioural regulation. Howard Gardner's (1993) work on multiple intelligences emphasises the need to be in tune with not only our own emotional state but also the emotional state of others. This 'emotional awareness' according to Gardner is not a 'given', but is learned, with schools being an ideal place in which it can be taught. Goleman (1999) continues this argument believing emotional understanding and expression to be essential not only for our psychological well-being but also intrinsically linked to academic, social and career success.

Citing works of Hoffmann, Radke-Yarrow and Zahn-Waxler, Goleman (ibid) discusses the origins of empathy and their links with parental attunement of the young infant, parental discipline and the outward displaying of emotions of parents towards their children. Children who demonstrate empathy are more sensitive and compassionate, are more altruistic, and are more likely to demonstrate moral principles such as intervening on behalf of a victim.

However, lack of empathy can result in emotional detachment, lack of remorse and compassion, an inability to make moral judgements, and at its worse can lead to psychopathic outbursts (Goleman, 1999). Whilst the development of empathy is intrinsically linked to our early care-givers, Goleman cites works of Etzion (1993) and Hawkins et al. (1991) on the importance of schools in cultivating character and 'inculcating empathy'. This is not achieved through lecturing about values but in practicing essential emotional and social skills:

> In this sense emotional literacy goes hand in hand with education for character, for moral development and for citizenship.
>
> (Goleman 1999, p. 286)

Evidence of this is provided by Norwick and Duke's (1992) study in which they discovered that children who displayed an awareness of their own feelings and were sensitive to others were more emotionally stable, more popular and achieved more academically than peers of similar intellect but of less emotional ability. Similarly other studies have found that various aspects of emotional understanding are significantly related to teacher ratings of maturation, imagination, mental age and Piagetian developmental levels (Gilbert 1969, Harter 1983, Carroll and Steward 1984 in Goleman 1999). More recently Greenberg's research has indicated a significant improvement in children's academic achievements following a programme on emotional literacy (Greenberg, 2002). Greenberg's explanation of this is that children do not become 'more clever', but when the obstacles which 'get in the way' of learning are reduced or removed, the child then has a greater chance of accessing more of their own inherent abilities. Recognition and expression of feelings enables children to be more socially competent, promotes impulse control and facilitates the development of problem solving strategies (Cowen et al., 1996). Children are surrounded by negative environments, most of which are beyond their control (e.g. deviant peer group pressures, unstable families, delinquent neighbourhoods), therefore the ability to think for themselves, and to make informed choices are essential, life-long skills (Elias & Clabby, 1992).

The identification, labelling and expression of *negative* emotions are also essential for psychological well-being (Goleman, 1996). However the 'ventilation' of feelings and inappropriate management of them can be harmful to children and result in long-term difficulties (Weare, 2001). Successful emotional education depends on the qualities of the teacher, positive staff-student relationships (Visser & Cole, 1999), appropriate staff training (Greenberg et al. 1998) and an integrated, evidence based programme (Goleman, 1996).

2.3 Behavioural Approach

'Behavioural' is a broad label covering a family of models. Evolving from the work of Skinner (1948) Pavlov (1928) and others (in Corey 1996), and more recently incorporating cognitive dimensions (Kendall & Lochman in Rutter, 1994) behaviourists hold several common beliefs. The fundamental principle in behavioural psychology is that all behaviour is essentially learned behaviour and as such can be unlearned. A behavioural approach assumes behaviour is caused by stimuli (antecedents) and/or reinforcers (consequences). Thus unwanted behaviour can be extinguished by the removal of reinforcers, whilst increasing and intensifying reinforcers can encourage desired behaviour. Rewards in the form of praise and approval, as well as tangible rewards are powerful reinforcers and can, in themselves, facilitate positive change. The 'antecedents' are circumstances which precede or accompany the behaviour and include time, place and people. If one or more of these conditions are changed, the likelihood is the behaviour will also change (Herbert, 1996).

2.3.1 Behavioural Approach and Schools

This approach has general and specific implications for schools and children's emotional and behavioural development. The need for teachers to act as positive role models and to use praise and rewards as a means of motivating and promoting positive behaviour is well documented (Cooper et al. 1994). Unfortunately, as studies indicate (Merrett & Wheldall

1982) children are frequently rewarded for academic achievements but are rarely reinforced for demonstrating appropriate behaviours. Citing their own research and the resulting Elton Report (1989), Merrett & Wheldall (1982) maintain that behaviour problems in schools can be vastly reduced if teachers are more sensitive and more positive in their interactions with children. Whilst behavioural approaches have been used successfully in a variety of school settings (Charlton & David, 1993), it is argued that they are ineffective and even detrimental to children's psychological development (Glasser, 1987). The over use of sanctions and isolation, the lack of self-discipline and inconsistency of practice support the opinion that behavioural approaches alone are insufficient to bring about long term change (Weare, 2001). Components of effective school based programmes however include the integration of behavioural skills with social and emotional education (Hawkins et al., 1992), are experiential structured and include the child's ecosystem (Bronfenbrenner, 1992).

2.4 Humanistic Approaches

Humanistic psychology has a broad set of theories and models connected by shared values and philosophical assumptions (McLeod, 1998). The common ingredients of humanistic thinking are the importance of the 'here and now' experiences of the person, the need of the individual to reach self-fulfilment (self-actualise) and the need to be loved and valued by others (Rogers, 1951). According to Axeline (1989) behaviour change in the child occurs through insight he has achieved himself. Thus, a purist using a non-directive approach would therefore offer no suggestion, direction or structure.

The practical implications of humanistic thinking overlap with psychodynamic approaches in as much as self awareness, the expression of feelings, empathy, positive relationships and a warm accepting environment are essential pre-requisites for healthy development. For the

purpose of this paper the function of the self-concept in relation to children's development in schools, from a humanistic perspective, will be discussed.

2.4.1 The self-concept

To the humanistic thinker, the self we are born with is the person's true self (Mearns & Thorne, 1988). 'Conditions of worth' placed on children by parents, peers, teachers and others serve to separate a child's true self from his perceived self-concept. Thus, he often believes himself to be stupid, naughty, ugly, lazy, and so on because that is what he has been told. His self-concept distorted, the child (and adult) behaves in ways to maintain this self-belief: 'We are all born with the potential to be princes and princesses, life experiences turns us into frogs' (author unknown). According to Brandes (1986) people cannot live and learn effectively without a strong, positive self-concept. The sources of our self-image have already begun through the early experiences of the child within the family, the school often receiving the child already in a vulnerable state with a poor self-concept. The school is in a strong position to further damage the child's self-image or, with the right pre-requisites, to begin the process of increasing and improving his self-esteem and restoring his true self (Rogers, 1960).

2.4.2 Humanistic Approach and Schools

Humanistic thinking would differ from the behaviourists in how best the school can positively influence the child's sense of self. They would view the system of rewards and punishments as constant reminders to the child that he is not meeting standards and expectations. This creates a pattern of conditional approval, the child soon learning that you are accepted and smiled upon 'only if...'. Children within this system soon learn to become 'pleasers', they behave well often out of fear of 'displeasure'. The end result of punitive measures of discipline is a lowering of the self-concept - "Nothing will change for the better until educators and others learn that the stimulus-response theory is wrong" (Glasser, 1990).

Children socialised in this model, according to Glasser, search for external guidance and direction and begin to lose confidence and trust in themselves. Healthy, functioning individuals however, have their own internal 'locus of evaluation', take responsibility for their own feelings and behaviours and exhibit 'self' discipline. In contrast with behavioural thinking, pure humanists maintain the premise that children cannot be *taught* how to behave: "We cannot teach anyone directly we can only provide an environment in which he can learn" (Rogers 1951 p.389). This environment is achieved by providing a warm, accepting, non-judgemental climate, free of threat and one in which the child *feels* the power of another person's belief in his integrity. Believing in the individual's inherent drive toward growth and self-fulfilment, person-centred educators believe that children (given the above conditions) will choose activities, resources and experiences that will maintain or enhance the structure of self (Mearns & Thorne, 1988). Taken to its extreme all learning would be individual and differentiated. Axeline (1989) and other non-directive facilitators (Newsom, 1992) believe in the innate ability of the child to self-actualise. The child would lead and the facilitator would follow. Axeline also considers the child's personality as already being influenced too much by adults; any structured programme would be reinforcing this.

To promote and develop a positive self-image Brandes (1986) advocates an 'esteem raising' campaign which is all pervading and exists not only in lessons on personal and social education but which permeates throughout the whole of the school. Citing George Brown, Brandes (1986) recommends 'confluent education'. That is the flowing together or 'confluence' of cognitive and affective learning. Maintaining that it is difficult to separate our thinking selves from our feeling selves, Brandes (ibid) suggests we do more than pay lip service to the politically correct term of 'educating the whole child'. This is achieved by the encouragement of the 'whole person' - teacher and student being present in the classroom. Thus feelings are expressed and communicated by teachers and students alike, teachers are

real and genuine (not actors), children are empowered through experiential learning and opportunities are created for children to give and receive positive feedback (e.g.'compliments' Greenberg & Kusche, 1994).

2.5 Ecological Approach

Critics of *traditional* psychological models of human development have centred on the over focus on the individual. To Spinelli (1994) the existence of self is debatable, and he prefers the concept 'self in relation' rather than a separate fixed entity. Josselson (1996) posits the importance of relatedness and relationships. Milne (1999) believes it is essential to move away from the view of human beings as self-contained unitary individuals who carry their 'uniqueness' within themselves to a consideration of human beings as social animals in need of social support at every level.

2.5.1 Ecological approach and 'systems'

The ecological model is a 'social' model and takes the view that the person is embedded in a number of interrelated structures: home, school, community, organisations, belief systems and cultures, each nested within the other 'like a set of Russian dolls' (Brofenbrenner, 1979). As such the individual's behaviour can only be meaningfully considered within these contexts. The ecological model suggests four levels for classifying context. The first level, the microsystem, is composed of ecologies with which the child directly interacts such as the family, school, peer group, and neighbourhood. The 'mesosystem' encompasses the relationships between the various microsystems (e.g., the family-school connection or between the parents and the child's peer group and peers' families). The 'exosystem' consists of social settings which do not directly impact on the child's development but provide contexts which affect the microsystem and the mesosystem. Components of the mesosystem include the child's extended family, the mass media and the education system. Many

preventive interventions may be viewed as changes at the exosystem level that alter interactions among lower system levels. Finally, the 'macrosystem' represents the widest level of systems influence, consisting of the broad ideological and institutional patterns and events that define a culture or subculture.

Greenberg et al. (1999) stress the importance of specifying which level an intervention is targeting, for example, is it the behaviour and attitudes of the individual, or changing the nature of the system's operation itself (Weissberg et al., 1991; Greenberg et al. 1999). According to Greenberg et al. (1998) universal prevention programmes should be assimilated within the broader school context and should be coordinated with other school-based support systems including special education, school psychologists and other wider service providers. However, systemic research into organisations would seem to confirm the difficult task for the individual in trying to make changes without the full co-operation of all the people concerned (Palazzoli, 1984). Palazzoli, an educational psychologist found the task of changing a school system impossible unless there was an organisational readiness for change and there existed full commitment by each of the members.

2.5.2 Ecological Approach and Schools

Dowling (1994) advocates a staged approach to working with family and school systems which includes respecting the existing hierarchies, informal familiarisation to gain a feel for the culture of the existing system and ongoing communication. Other writers have discovered the importance of preparation and planning before any work is undertaken. This is particularly the case with schools, as traditionally, there exists mistrust in schools of mental health professionals (Evans, 1999). Waxman et al. (1999) discovered issues around 'turf' to be problematic between mental health professionals and teachers. Evans (1999) found that

even when mental health professionals managed to work in schools with the cooperation of the staff, parents often complained because they felt excluded (Evans, 1999).

Ecological awareness is essential not only for universal interventions but also for individual work with children with emotional or behavioural problems. As Ravenette (1997), a personal construct practitioner, illustrates:

> Children do not themselves ask for help...whatever issues or difficulties they may or may not have attributed to them, it is an adult who is making the referral.
>
> (Ravenette, 1997 p.165)

In a similar vein Osborne when reflecting on the referral of a child to a service states,

> I believe that a statement about someone's problem is also a statement about someone else's difficulty to handle it.
>
> (Osborne in Dowling & Osborne 1994 p.39)

Dowling (1994) goes on to suggest that when dealing with child behaviour problems, the school often blames the family, and the family often blame the school but they both agree that the child 'needs help' and subsequently seek for an expert who will provide it. The end result therefore is the symptom is addressed without any reference to the cause and much of the focus can result in the child being 'pathologised'.

> This view seems especially relevant to the way we approach schools, where the solution to a single child's problematic behaviour or their learning difficulty, for instance, by their removal or cure, leaves the school no better equipped to deal with the next problem, except by calling for the same solution.
>
> (Dowling, in Dowling & Osborne 1994 p.59)

Citing the work of Smail (1995), Longenbaugh (1995) and others Milne (1999) considers social support, social skills training and social sensitive therapy to be 'inextricably intertwined' with individual work, and encourages mental health professionals to 'come out of the clinic' and be creative in their interventions (Milne, 1999 p. 237). McLeod and Machin (1998) consider the importance of the 'macro' image of the organisation, its relationship with other institutions, and the influences of training and research.

Recent government initiatives seem to echo this and encourage working with children to a more social and systemic approach (DfES, 2001). In 1994 the Department of Health commissioned an investigation into mental health services for children and adolescents and in 1995 published its recommendations in a Health Advisory Service Report. Their recommendations suggested:

> ...individual professionals from primary health care teams should work with young people and their families in a variety of community premises and within a young person's home, school or other residential establishment [and there should be] coordination of the inputs of other agencies, having knowledge of the systems responsibilities and constraints statutory or otherwise on those agencies.
> (NHS/HAS, 1995 p.139)

Additionally, government backed initiatives, Surestart, OnTrack (aimed at working with young families), and Children and Youth Partnership in Wales (money given directly to LEA's to support, amongst other things, mental health provision), not only influence the philosophy of the organisation but have a direct impact on the resources and staffing of the service. Thus the current political ideology can have a tangible effect on service development and delivery which may result in professionals having to work in ways that may not always complement their own theoretical persuasion (Pilgrim, 1997).

2.6 The PATHS Curriculum and Counselling Theory

The PATHS curriculum (Promoting Alternative THinking Strategies, Greenberg & Kusche 1994), is an early intervention/prevention programme designed to be used by educators and counsellors in mainstream or special schools. PATHS is a comprehensive programme for promoting emotional and social competencies and reducing aggressive and behavioural difficulties and thus enhancing the educational process in children (aged 4-11years).
The PATHS Curriculum is based on five conceptual models, The ABCD Model of Development (A-affect, B-behaviour, C-cognitions, D-dynamic model), the Eco-Behavioural System Model, Psychodynamic Education, The Psychology of Emotional Awareness, and Neurobiology. The ABCD Model of Development (Greenberg et al., 1998) incorporates the

developmental integration of affect, behaviour, cognition and language in the promotion of emotional and social competence. Unfortunately, according to Greenberg the school system has traditionally concentrated on cognitive and language development. Therapeutic treatment programmes have been concerned either with behaviour change, or with emotional experiences at the expense of their full integration:

> a critical focus of PATHS involves facilitating the dynamic relationship between cognitive-affective understanding and real life situations.
>
> (Greenberg et al., 1998 p.24)

Acknowledging research that demonstrates links between deficits in emotional development and psychopathology, Greenberg comments on the lack of research into the role of emotional development and the *prevention* of difficulties. PATHS takes this into account and,

> Synthesises the domains of self-control, emotional awareness and understanding, and social problem solving to increase social and emotional competence.
>
> (Greenberg, 1998 p.9)

Additionally Greenberg and others (Evans 1999; Kubiszn 1999) believe that interventions need to take into account the systems in which children operate, namely the school system and the family system. School-based programmes that focus independently on the child are less effective than those which take account of the child's environment (Greenberg et al., 1999). Thus a central tenet to the delivery of PATHS is the teaching of skills in real-life, meaningful situations and the establishment of structures to provide reinforcement for effective skill development. Through extensive teacher training and parental participation the authors hope to not only change the child's behaviour, but the teacher's behaviour, the relationship between the teacher and child, the relationship between child and parent and the relationship which exists between home and school and ultimately the child's wider environment (Greenberg et al., 1998).

Psychodynamic education and emotional awareness is demonstrated in PATHS in a variety of ways. Children are taught how to label their emotions, they are encouraged to be in tune with their own feelings but also to recognise feelings in others. Through the interconnection between emotions and behaviours children learn how our behaviours affect other people's feelings. This approach to 'empathising' is more likely to result in them demonstrating positive behaviours through their own internalising process rather than because 'they have been told to do so'. Additionally through activities such as the giving and receiving of compliments and expression of positive attributes (for example, times when 'I've felt proud'), children are encouraged to develop a positive sense of self, learning to like and respect themselves which in turn helps in the way they interact, appreciate and respect others. Children are also taught strategies to manage and regulate their feelings, learning that all feelings are important and necessary but the expression of these feelings at times may not be appropriate. In a structured developmental process children learn ways of calming down, and planning and generating possible goals and solutions to problems that arise. They are provided with real situations to practice strategies and evaluate the consequences. Through the generalisation of these strategies children are encouraged to take ownership and responsibility for their actions and develop healthy internal motivation. Parents are informed on a regular basis of the content of the children's learning in the form of letters, information handouts and invitation to workshops.

In order for children to engage in this socialisation process activities need to be varied, experiential and fun. Teachers need to feel confident and comfortable with the materials and with a potentially different way of relating to children. Techniques used in the PATHS curriculum are wide ranging and include such activities as dialoguing, role-playing, story-telling, colouring, and modelling by facilitators and peers (Greenberg & Kusche 1994). The curriculum is well structured but flexible enough to allow for the creativity of the teacher and

uniqueness of the children, and guidelines and details for delivery are provided in the comprehensive Instructors Manual and in plans that accompany each lesson.

2.6.1 Previous Studies of the PATHS Curriculum

Previous field trials of the PATHS curriculum with both deaf children and with mainstream and other special needs children have shown the use of the PATHS curriculum is associated highly with an increased recognition of emotions, more social cognitions, including better understanding of social problems, higher percentages of effective solutions and lower percentages of aggressive and passive solutions (Greenberg & Kusche 1993, 1998; Greenberg, Kusche, Cook & Quama 1995). In all three samples, teacher's reported significant improvements in behaviours targeted by PATHS (self-control, emotional understanding and use of more effective conflict resolution skills). In special needs children, PATHS also led to significant decreases in self-reported sadness, decrease in teacher reports of internalising problems and increases in teacher reports of social competence (Greenberg & Kusche 1993, 1998; Greenberg, Kusche, Cook & Quama 1995).

In addition to the above evaluative studies, PATHS was the universal component in a comprehensive multi-site longitudinal study for violence prevention (Conduct Problems Prevention Research Group 1992), (CPPRG). The intervention was conducted with three cohorts of first graders; 198 schools took part in the intervention and 180 schools were randomly matched controls. The Fast Track prevention programme was implemented in four different American locations, and aimed at children at 'high risk'. In addition to the universal intervention of PATHS, 'selected' components included parent training groups, child social skills training and child academic tutoring. Findings at the end of the first year indicated that in schools in which PATHS was being delivered there were more positive reports compared to matched comparisons in the following areas: lower peer aggression scores, lower peer

hyperactivity scores, lower teacher ratings of disruptive behaviour and improved classroom atmosphere. Measures used for the study included child sociometrics, teacher report and independent observers. (Greenberg et al.,1998). Follow up studies are still in press, but the authors' preliminary conclusions suggest that in addition to PATHS demonstrating positive outcomes, the study indicated that universal and selective (targeted) interventions can effectively be integrated to provide a complex, comprehensive model of prevention to high risk children and families (Greenberg et al.,1998).

2.7 Summary

Risk and protective factors associated with children's emotional and behavioural development are complex. They include individual characteristics within the child, and in relation to his/her own development. They also include factors associated within the family, in the home, the school, peers and broader aspects affecting the child's wider environment. The identification of common risk and protective factors has implications for early intervention/prevention programmes and for school-based social/emotional competence promotion. Effective service provision will have interventions that cater for universal (all children), targeted (children at risk), and individuals (identified children, Offord, 1999). A common framework for effective prevention and competence promotion should integrate sound theoretical approaches and focus on decreasing risk factors and increasing protective factors. Accordingly, school-based programmes need to address multiple adjustment outcomes rather than focusing on one (e.g. drug awareness, teenage pregnancy), and should include the teaching of social and emotional competencies (which are in themselves protective factors for a variety of adjustment outcomes). The PATHS Curriculum is an example of a school-based programme, which fulfils the above criteria. Based on psychological concepts it embraces aspects of humanistic, psychodynamic, behaviourist and ecological (and neurobiological) theories to produce a fully integrated developmental model.

The result is an effective programme that focuses not only on the child but also on the multiple contexts in which the child lives. However the quality of PATHS is very much dependant on the quality of the teacher training, the motivation and capabilities of the individual teachers, and the consideration of broader ecological issues (administrative support, perceived parental and community support), (Greenberg et al., 1998).

Chapter 3 Methodology

3.1 Philosophical Approaches to Research

Approaches to counselling research generally fall into two separate paradigms, the 'old' and the 'new' (Henwood in Richardson, 1996). The 'old' paradigm is characterised by a positivist approach in which reality is seen to be 'out there', and can be observed and measured objectively. The purpose of research within the old paradigm would be to describe, understand and subsequently predict the phenomena of the world (McLeod, 1994). Thus it is possible to generalise explanations, predict patterns and offer support to hypotheses by performing experiments. The methods employed within these experiments should be 'controlled', so that accurate cause and effect can be identified. Instruments used to access the accuracy of the experiment would usually include tests, scales and questionnaires. These measures ideally should be backed up by data demonstrating strong reliability and validity. McLeod (1994) suggests the main advantages of the positivist approach lie in the ability to deal with large numbers, the ability to deal with cause and effect and the potential to examine complex patterns of interaction between variables. Additionally this scientific rigour is often considered to be prestigious.

By way of contrast the 'new' paradigm is characterised by a view, which sees reality as a construct of the human mind, as such our understanding of the world is socially constructed and is therefore contextual rather than objective. Methods used to obtain information could include notes, diaries and transcripts of tape recordings. The researcher seeks to discover plausible descriptions or explanations of reality rather than prove generalised hypotheses. The appeal of this relativist approach within the field of psychology is that it provides detail and depth of human experiences that cannot be reduced to cause and effect, but can prove helpful to informing practice (Richardson, 1996). Each paradigm has its critics. Hays (1981)

for example criticises the use of 'null hypothesis' and states, "virtually any study can be made to show significant results if one uses enough subjects" (Hays, 1981 p.293). Giving generalised explanations or offering proof of hypotheses is often misleading, as according to Meehl (1978), there can always be an alternative explanation. Critics of qualitative research invariably include the role of the researcher and lack of objectivity (Richardson, 1996) and the potential for it to become too radical and resort to 'mere journalism' (Coolican, 1994). McLeod (1994) criticises the either or arguments and considers whether a more 'pragmatic' or pluralist approach would be beneficial. Citing the works of supporters of pluralistic methods (Howard 1983; Bergin and Garfield 1994), McLeod (1994) considers it meaningless to give behavioural measures and test scores without an account of issues such as client, treatment and process. However, McLeod criticises research that attempts to combine both paradigms without any clear rationale, and cautions against making joint interpretations on fundamentally different criteria (McLeod, 1994).

3.2 Research Design

This is a quantitative, evaluative study, with data collection at pre and post intervention. Quantitative research was chosen because of the large number of children involved and is traditionally the accepted method of enquiry for evaluative studies (Mcleod, 1994). Previous studies on universal interventions generally, and PATHS in particular, have used quantitative research as such findings can be compared (Greenberg, 1999). Data will be collected using the Strengths and Difficulties Questionnaire (Goodman, 1997) and the Teacher Concern Rating (FPCSC, 1999). The Teacher Perception Rating (Fast Track, 1995) will be used post intervention only.

3.2.1 The Process

Schools in a county in North Wales, who had previously shown an interest in PATHS, were approached and invited to an open meeting to inform them of the research and to discuss implications in taking part in the study. Out of the twenty-two schools represented, eleven schools expressed an interest in taking part. The researcher considered five schools to be a manageable number.

3.2.2 The Sample

The final sample was selected (not randomised) in conjunction with colleagues in the Local Education Authority (LEA) on the basis of the following inclusion criteria:

- mainstream primary or infant school
- the headteacher was committed to Personal and Social Education (PSE) in general and the promotion of PATHS in particular
- there was adequate representation of different electoral wards
- 'stable' staff (i.e. a history of relatively few staff changes)
- 'stable' pupils (i.e. a history of few changes within the student population)
- the school was not undergoing inspection during the data collection period

The five schools selected were from 5 different wards in one unitary authority in North Wales with a total population of approximately 89,000. Each ward is urban and densely populated, the population in each ward ranging from 3,300 to 5,200. One of the wards has the second highest score for unemployment, low income and health deprivation in the county. Three out of the five wards score highly in overall deprivation (Census, 1991).

Once the five schools were selected the headteacher in each school was contacted to ascertain the number of classes, teachers and children who were wiling to take part in the study. Each

headteacher in collaboration with his/her staff chose their own classes based on the following inclusion criteria:

- the teacher was committed to teaching PATHS for the duration of the intervention period (October 2001-July 2002).
- the children were in mainstream classes, attending full time and aged between 4 and 8 (reception– year 3 inclusive)

A total of 13 teachers and 327 children were originally selected. Five parents refused to allow their child to take part in the study, but no one refused their child to have access to the PATHS programme. The reasons for refusal included: not being interested, not understanding the purpose of the research and "not feeling able to offer an explanation".
Nine children changed schools during the intervention period; therefore the total sample for inclusion in the study was 313 children in 13 classes spanning four-year groups (reception-year 3). Thus 13 teachers were involved in rating the children.

3.3 Teacher reliability

Next to home, school has the most impact on a child's development (Dowling and Osborne, 1994). In primary schools the class teacher is the person most likely to influence the classroom atmosphere, pupil relationships and ultimately the behaviour of the child. Additionally, research indicates that a teacher's perception of a child's psychological development compares favourably to the child's parent (Elander & Rutter, 1996). It is recognised therefore, that if teachers are asked to rate a child's emotional and behavioural development the results will be fairly accurate (Stallard, 1995).

3.4 Measures

3.4.1 The Strengths and Difficulties Questionnaire

The Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997; Goodman & Scott 1999) was based on the Rutter parent and teacher questionnaires (Rutter 1967; Elander & Rutter, 1996) and is a brief screening instrument designed for informants to assess behavioural and emotional difficulties and pro-social behaviour in children aged 4-16 years. Recent findings suggest it compares favourably to the longer Child Behaviour Checklist (Goodman & Scott, 1999) yet is quick and easy to administer. For teachers with approximately 30 questionnaires to complete it is essential that the data collection was not too time consuming. The SDQ asks informants about 25 attributes, 10 of which would generally be thought of as strengths, 14 of which would be considered as difficulties and one which is neutral. The questionnaire collects information on five different areas: conduct problems, emotional problems, hyperactivity, peer problems and prosocial behaviour. Thus the 25 items are divided into 5 sub-scales of 5 items each: hyperactivity scale, emotional symptoms scale, conduct problem scale, peer relations scale and prosocial scale. Each item can be marked 'not true', 'somewhat true' and 'certainly true'. For 20 items scoring is 0 for 'not true', 1 for 'somewhat true' and 2 for 'certainly true', the other five items are reverse scored. The score for each of the five scales is generated by summing the scores for the five items that make up the scale, thereby generating a scale score of 0-10. The scores for emotional symptoms, conduct problems, hyperactivity and peer problems are summed to give a total difficulties score ranging from 0-40. The prosocial score is not incorporated in the reverse direction into the total difficulties score (i.e. by subtracting the pro-social score from the total difficulty score) since the absence of prosocial behaviours is viewed by the authors as being conceptually different from the presence of psychological difficulties. The prosocial score is therefore treated as an independent construct. The SDQ has high reliability and validity, and

has been used effectively in primary care, population based samples (Goodman & Scott 1999; Appleton et al., 2001).

3.4.2 Teacher Concern Rating

Based on the work of Stallard (Stallard, 1995) and piloted by our own service (FPCSC, 1999), the Teacher Concern Rating is a simple 'impact' measure for teachers. It asks the categorical question, " Overall are you concerned or troubled about this child's behaviour?" The scoring is similar to the SDQ, no concern is 0, some concern is 1 and definite concern is 2.

3.4.3 Teacher Post Rating Scale

This post-test measure was devised by the Development and Research Programme specifically to assess the impact of their Fast Track interventions, one of which was the PATHS curriculum (Fast Track, 1995). It has 10 items and asks teachers to estimate the degree to which they have observed improvements in the child's behaviour and social skills. This is a new measure and data has therefore been collected to determine how useful the measure is in ascertaining teacher perception of change and how it performs as a rating score. No studies (to the writer's awareness) have reported its use. The teacher is asked to assess academic performance and behavioural functioning on a Likert scale (**–3** to **+ 3,** much worse, somewhat worse, a little worse, no change, a little improved, somewhat improved, and much improved) for each of the 10 items. It is more sensitive to intervention effects since even small improvements can be identified. Thus children who are described as still showing difficulties in the other two measures (SDQ and Teacher Concern Rating) may still show improvements on this measure since the last rating.

3.5 Procedure

Successful school-based interventions are dependent on the readiness of the staff for the intervention (Palazzoli, 1984), and the relationship that exists between the school and the 'outsiders' (Waxman, 1999). With this in mind it was felt important that each teacher *volunteered* to deliver the PATHS programme and *volunteered* to take part in the research. The researcher established good relationships with the teaching staff and offered demonstration lessons, training and continued support in return for taking part in the study.

Open staff meetings about the research were held in all of the intervention schools during which the teachers were provided with written information about PATHS (Appendix 1), explanations about the research (Appendix 2) and consent forms for the teachers to take away and consider before agreeing to take part in the research (Appendix 3)
Letters (Appendix 4) were also sent to the parents of all the children in the selected classes informing them of the research and asking for:

- consent for their child to take part in the PATHS programme
- permission for the child's teacher to complete questionnaires before and after the intervention.

Pre-intervention data, (time1) was collected during a three-week period in October 2001, post-intervention (time 2) data was collected over the same time span in July 2002. The implementation of the programme took place after time1 (t1), with a minimum of 12 lessons delivered before time 2 (t2).

3.5.1 Data Analysis

Information from the coded questionnaires was entered into a SPSS data base by the author and psychology assistant working with Flintshire Primary Care Service. Errors can be made when entering data of such large numbers (Green 1982), therefore, systematic and spot checks

were regularly made on the data entries. Advice on appropriate statistical testing was sought from the author's supervisor, and the research department at Bangor University. Wilcoxon non-parametric tests were used using SPSS. Chi-squared analysis was conducted manually by the author using information from Green et al. (1982).

3.6 Limitations of Methodology

The main limitation of the study was the lack of a matched control group, as such changes in data post intervention cannot be assumed to be related directly to the PATHS intervention. The researcher considered a matched control, but in addition to limited resources the researcher considered other difficulties; recent school-based population research identified problems with matching the participants and accounting for change in variables (Appleton et al., 2001). Within any school, class size, change of teacher, teacher-student relationships, curricula delivery can change. Additionally previous research has indicated potential bias when participants are aware of being either in the 'control' or 'intervention' group. Randomised trials therefore would be the preferred option but are expensive, difficult to control (Appleton et al., 2001) and beyond the scope of a Masters Dissertation.

3.7 Ethical Considerations

McLeod (1998) suggests that most forms of counselling research contain ethical dangers. These 'dangers' vary according to the study and often need the approval of an ethical committee. Typical dangers according to McLeod include confidentiality, 'waiting list' control, and the trial of 'new' approaches. To some extent all three were issues in the current study, additionally the involvement of children presented extra concerns. Also as a health professional working in a school environment consideration needed to be given to the existing systems, policies and practices. Ethical approval therefore was sought from the committee. This involved providing full written description of the proposed study and attending an

interview with a panel of eight professionals and elected lay people to fully explore all the ethical considerations. Included in the final approval were the following issues:

- Confidentiality~ a unique code was given to each child, names of school, teacher or child were not entered on to the data base (see3.7.3)
- Consent~ the children were considered to be too young to give informed consent to participate in the study (Lee, 1993), however it was felt that parents needed to be informed of the study and consent was needed from them for their child to be involved (Appendix 4). It was also considered important that the teachers were fully involved in the process and had permission to withdraw from the data collection at any time (Appendices 2 and 3). Additionally, taking part in the study involved extra work for the teachers. The author therefore requested and received approval from the Local Education Authority for extra funding for supply cover for the additional time taken to complete the questionnaires. Each school via the headteacher had this additional resource but few made use of it.
- Child protection ~ the author's of the PATHS programme do not consider the material to raise extra concerns regarding child protection. However, in providing increased opportunities for children to talk openly about their feelings and behaviours some teachers' felt children may be more likely to disclose personal matters. Denbighshire's Child Protection policy and each individual schools' Pastoral Care and Child Protection Policy were felt appropriate procedures to be called upon if necessary (see 3.7.2)
- Waiting list control ~ without a control group this was not a major concern, however, resource implications meant only 5 out of a possible 11 schools were included in the study. An agreement was made therefore with the Local Education Authority for the remaining schools to receive the PATHS curriculum via the educational psychology and behaviour support teams.

The Ethics Committee requested details of the results of the study and the dissertation. These will be presented after the dissertation has been assessed.

3.7.1 Potential Benefits of the Study

Provision of early help for a child's behavioural problems is more beneficial than help when the child is older (Kazdin, 1996). Delivery of preventive programmes in the usual school curriculum is of benefit to all children, yet does not pose clinical dilemmas associated with 'false positives' and low pay off which is faced by specialist CAMHS teams in delivering universal interventions (Durlak, 1995). An additional potential benefit relates to CAMH service delivery, and could promote the extension of 'tier 1 and 2' interventions in the Denbighshire area (NHS/HAS, 1995). To date, to the author's knowledge, there is no research into the effects of this programme or any other preventive universal school based programme in the UK. Information from this study may inspire further investigations.

The children and teachers involved in the study will have specifically addressed pro-social learning in the classroom, which is highly conducive to positive peer and teacher interaction (Greenberg et al., 1999). Accounts from teachers and even small changes in pre and post intervention measures may encourage other teachers in the schools to continue with the programme.

3.7.2 Potential Hazards of the Study

Talking about feelings and behaviour raises awareness of emotional well-being in children (Greenberg, 1995). As PATHS is a preventive programme that addresses the attainment targets of the Welsh Personal and Social Education Policy, it is not expected to raise extra concerns. Completing the questionnaires may raise awareness with the teachers and alert them to children's behaviour/emotional difficulties earlier than usual. Denbighshire

Educational Psychology Department and Behaviour Support Unit are in full support of the intervention and evaluation and will be available to offer extra help to the schools. Flintshire Primary Care Service will also be available if extra support is required. Links have also been established with the Emotional Health Programme Team, and CAMHS in the Conway & Denbighshire areas. Early identification, however, is more likely to have long-term benefits to children and services rather than any disadvantages (Durlak 1995; Offord 1999).

3.7.3 Confidentiality

To ensure confidentiality each child was given a unique code. Computerised data entry therefore was done using the code and not the child's name. All questionnaires were kept in secure cupboards in the office of Flintshire Primary Care Service for Children to be destroyed after the study had been successfully assessed.

Chapter 4 Results

4.1 Data Analysis

Quantitative methods inevitably produce large numbers and "You can prove almost anything with numbers" (Tarling, 1998 p139). Therefore according to Tarling it is essential that the statistical analysis used fits the data collected and that it is reported in a clear meaningful way. In this section raw demographic data will be presented followed by descriptive statistics summarising a breakdown of data collected. The results will then be discussed in accordance with the four hypotheses using statistical tests where appropriate. Statistical tests are used to interpret the data for hypotheses and to enable generalisations to be made, these tests can be parametric or non parametric. As the data collected is varied and does not fit a pattern of normal distribution the tests used are non-parametric, the Wilcoxon test is used because of its ability to compare two sets of related data (e.g time 1 and time 2 SDQ) and chi-squared test are used to investigate differences between categories (e.g. some concern and no concern).

4.1.2 Response Rate

The teachers did not move or change schools during the intervention period therefore the same teachers completed the questionnaires pre and post intervention. Information on children who had left or joined the schools during the intervention period was disregarded; consequently teachers collected data on 313 children (n=313).

Of the 313 children, 156 were males and 157 females (*table 1*). Table 1 also shows the breakdown of data for each school. The largest school sample being 96, the smallest being 32. The year group representations are also shown; the largest sample collected was from the children in year 2 (aged 6-7), the smallest from children in year 3 (aged 7-8).

Table1 Characteristics of sample

CHARACTERISTIC		NO.	%
total	N=	313	100.0
gender	males	156	49.8
	females	157	50.2
school	A	32	10.2
	B	48	15.3
	C	67	21.4
	D	70	22.4
	E	96	30.7
year group	REC	100	32.0
	YR 1	52	16.6
	YR 2	111	35.5
	YR 3	50	15.9

4.2 Valid Data

Table 2 displays the number of completed questionnaires returned for time1 (t1) and time 2 (t2). Teachers completed questionnaires on the same children at t1 and t2, however not all items on the SDQ were completed. Table 2 indicates a discrepancy on the Teacher Concern Rating between t1 and t2. In total there is missing data on 19 children. The Teacher Perception Rating (TPR) was completed at t2 only, all questionnaires were returned.

Table 2 Valid data collected at time 1 & time 2

MEASURE	T1 NO.	T2 NO.
SDQ total	311	308
Prosocial	312	312
Hyperactive	313	313
Emotional	313	313
Conduct	311	313
Peer	313	308
Teacher concern	293	312
TPR*		313

*Teacher Perception Rating time 2 only

4.3 Hypotheses

4.3.1 Hypothesis 1

Children will show overall improvement on the Strengths and Difficulties Questionnaire (Goodman, 1997), thus children who are rated as 'borderline' or 'clinical' on the SDQ by teachers pre-intervention will be rated as improved by teachers post-intervention.

Table 3 Distribution of SDQ categories time 1 and time 2

CHARACTERISTICS		Time 1 No	Time 1 %	Time 2 No	Time 2 %
Distribution of total SDQ scores	Normal	254	81.7	279	89.2
	Borderline	33	10.6	17	5.4
	Clinical	24	7.7	17	5.4
Males	Normal	123	79.4	128	82.1
	Borderline	14	9.0	13	8.3
	Clinical	18	11.6	15	9.6
Females	Normal	131	84.0	151	96.2
	Borderline	19	12.2	4	2.5
	Clinical	6	3.8	2	1.3

Table 3 shows the distribution of the SDQ scores at time 1 and time 2. Children who scored between 12 and 15 on the total difficulties (i.e. total of all subscales except prosocial) are classified as 'borderline' in terms of deviance and children whose score is between 16 and 40 are classed as 'abnormal' (or 'clinical). These bandings have been selected by Goodman to correspond within a community sample (not high risk or low risk). The overall number and proportion of children who are categorized as 'borderline' and 'clinical' is lower at time 2 than at time1. Comparison according to gender shows a decrease in both males and females, post intervention. The percentage difference in scores for females between time 1 and time 2 in both 'borderline' (80% reduction) and 'clinical' (66% reduction) is lower than the males.

Chi-squared analysis (Green, 1982) was used to determine whether the improvements between time 1 and time 2 were statistically significant. The tests show that the proportions in the categories are significantly different ($p<0.01$; *figure1*Appendix 9). Examination of the counts reveals the female 'borderline' seems to account for this difference (however female t2 'borderline' and 'clinical' E values < 5; *figure 2* Appendix 9).

4.3.2 Hypothesis 2

Children will show improvement on the prosocial subscale on the SDQ (i.e. the scores will increase). Children will also show improvement on the SDQ hyperactivity, emotional symptoms, conduct problems and peer problem subscales (i.e. scores will be lower).

Table 4 SDQ subscales Test Statistics c

	T2sdqtot-t1sdqtot	T2sdqpro t1sdqpro	T2sdqhyp-t1sdqhyp	T2sdqemo-t1sdqemo	T2sdqcon-t1sdqtcon	T2sdqpee-t1sdqpee
Z	**-4.426a**	**-1.407b**	**-3.842 a**	**-3.518 a**	**-1.437 a**	**-2.149 a**
Asymp.Sig. (2-tailed)	.000	.159	.000	.000	.151	.032

a based on positive ranks
b based on negative ranks
c based on Wilcoxin Signed Ranks Test

As predicted children showed improvements on all five subscales. Using the Wilcoxin non-parametric test improvements on the pro social and conduct scale were not statistically significant. However, statistically significant differences were revealed on the peer relations, hyperactive and emotional symptoms subscales. The latter two showed differences which can be rated as *very* significant.

4.3.3 Hypothesis 3

The number of children rated as having 'some' concern or 'definite' concern as rated on the Teacher Concern Rating will be reduced.

Table 5 Teacher concern rating t1 and t2

	Time 1		Time 2	
Concern rating	**No.**	**%**	**No.**	**%**
No concern	205	70	245	78.5
Some concern	75	25.6	53	17
Definite	13	4.4	14	4.5
Total	293	100	312	100

Table 6 Teacher Concern Rating t1 and t2 according to gender

	Time 1		Time 2	
	female	**male**	**female**	**male**
No	107	98	139	106
Some	35	40	16	37
Definite	4	9	2	12
Total	146	147	157	155

Table 5 shows that overall, teachers had fewer concerns at time 2 than time 1, however the actual number of children for whom teachers have 'definite' concern has increased by 1 post intervention.

Table 6 shows the breakdown of this information between males and females. Teachers concern of girls behaviour in both the 'some concern ' and the 'definite concern' range has reduced considerably at time 2. The boys however, has reduced slightly in the 'some concern' category and increased by 3 in the 'definite concern'. The total number of valid questionnaires however was more at time 2 than at time1 (one teacher forgot to complete the rating scale for a whole class). Consequently statistical analysis between time 1 and time 2 data was difficult. With the removal of this one class for analytical purposes, Chi-squared analysis was used to determine whether the improvement between time 1 and time 2 was statistically significant. The tests show that the proportions in the categories were not significantly different, overall ($p<0.10$; *figure5* Appendix 11), but were for females ($p<0.01$; *figure 6,* Appendix 11). Further examination of the counts reveals the 'some' concern category seems to account for this difference.

4.3.4 Hypothesis 4

The teacher's perception of the effect of PATHS on children's emotional and behavioural development will show overall improvement on the Teacher Perception Rating.

At the start of the research, the author assumed that previous data and scoring systems were available for this measure, unfortunately whilst this questionnaire was designed specifically to assess the impact of the PATHS curriculum, to the author's knowledge it has not been used previously in any published study. The author is therefore piloting the scoring and interpretation of results.

Table 7 TPR mean and standard deviation, post intervention only

	number	minimum	maximum	mean	std.deviation
TPR 3	313	-2	3	1.39	1.14
TPR 4	313	0	3	1.52	1.04
TPR 5	313	-2	3	1.51	1.09
TPR 6	313	-2	3	1.39	1.10
TPR 7	313	-2	3	1.45	1.10
TPR 8	313	-2	3	1.46	1.06
TPR 9	313	-2	3	1.51	1.08
TPR 10	313	-2	3	1.72	1.10

The teachers were asked if they thought PATHS has made a difference to each of the items on the Teacher Rating Scale. The first two questions relate directly to children's academic achievements. Whilst there is a correlation with children's academic performance and emotional and behavioural development (Rutter, 1990), the comments by the teachers indicated that improvement in a child's reading and written work would be inevitable with this age range and not directly related to PATHS. Question 1 & 2 therefore were not included in the findings.

All of the other questions indicated a positive rating of between 1.39 and 1.72 (table 7) thus indicating that overall children improved post intervention between 'a little improved and 'somewhat improved'. Further analysis revealed that 1 teacher only negatively rated 3 children. Consequently 310 children were rated between the range of 'no change' and 'much improved'.

Chapter 5 Discussion

5.1 Overview

The overall aim of the research was to obtain an understanding of the potential effects of the PATHS curriculum on the child's emotional and behavioural development as rated by the class teacher. Specifically the study hypothesised that the class teacher would perceive changes that could be measured on three rating scales, (Strengths and Difficulties Questionnaire, Goodman, 1997, Teacher Concern Rating, and Teacher Perception Rating). Four hypotheses were presented; each will be discussed in detail followed by a general summary.

5.2 Hypotheses

5.2.1 Hypothesis 1

Children will show overall improvement on the Strengths and Difficulties Questionnaire (Goodman, 1997), thus children who are rated as 'borderline' or 'clinical' on the SDQ by teachers pre-intervention will be rated as improved by teachers post-intervention.

Greenberg raises the question of the effectiveness of some universal interventions,

> because of the relatively low dosage provided by most universal interventions, they might not provide sufficient duration or intensity to alter developmental pathways of children already at significant risk for psychopathology.
>
> (Greenberg 1999 p.9)

At the other end of the spectrum Offord (1996) raises the question of whether universal programmes will have the greatest impact on those at lowest risk. At first sight the findings of this study would seem to support these views. Children who were rated as having emotional and behavioural difficulties within the 'clinical' range showed little improvement. Similarly children who were rated as 'normal' showed only minimal improvement. However children who were rated as 'borderline' showed significant improvements. One explanation

for the low level changes in the 'normal' and 'clinical' categories could be the low dosage provided by the teachers, which in most cases was one lesson per week. Whilst this was 'real world' delivery, it is much less than the recommended 3-4 lessons per week suggested by the authors. Also PATHS was designed as a multi year developmental programme. As with other school-based models one-year intervention is insufficient to demonstrate the potential long-term benefits of a comprehensive curriculum. As Greenberg (et al. 1998 p55) illustrates, "Using a social competence model such as PATHS for one year would be like teaching reading for a year."

The question could now be asked then why would significant changes occur in the 'borderline' group, presumably low dosage would effect all categories of children? In order to answer this question the writer looked at the breakdown of change according to gender. The equal split of males and females in the data (males n=156, females n=157) enabled gender comparisons to be made, which were not anticipated in the original hypothesis. At time 1, consistent with research, boys rated higher on the SDQ than girls. Specifically however, girls scored higher than the boys in the 'borderline' category. Thus at time 1 a higher proportion of girls than boys were rated as having difficulties which would place them at a higher risk than the boys of developing problems. However, further analysis revealed that differences in the 'borderline' category was only statistically significant for girls. Thus one assumption could be that PATHS as an intervention has a higher impact (in the short term) on girls than on boys.

In making these interpretations the writer is aware of the limitations of the research analysis: it cannot be assumed that the *same* girls moved from the 'borderline' category to the 'normal' category. However given the low numbers of girls in the clinical range at time 2 it can be assumed that the girls have improved more than the boys. Whilst the overall results look

promising, and approximately 75% of children showed improvement, it is worth noting that approximately 25% of the total sample got worse. With no matched control sample it is difficult to assume that the 75% improvement was indeed due to the PATHS curriculum. Similarly it cannot be assumed that of the 25% who scored lower at time 2 than time 1, that this was adversely related to PATHS. For example, the author is aware of unusually stressful situations occurring in one school which could have negatively influenced the ratings of the teachers and/or the behaviour of the students.

To add more information to the above findings the writer used a box plot analysis (*figure 3;*Appendix 10) which shows a decrease in the median of total difficulties scored between time 1 and time 2. Figure 4 shows both an increase and a decrease in individual scores, with more children reducing their scores (i.e. improving) after intervention between 8 and 20 points. Fewer individuals increased their overall score (i.e. got worse) by a maximum of 11 points, thus demonstrating that whilst a large proportion of children improved or remained the same, a small number became worse by a small amount and a few improved their scoring significantly. Speculation can only be given to explain these 'outliers'; further detailed analysis outside the scope of this dissertation could reveal more information.

5.2.2 Hypothesis 2

Children will show improvement on the pro social sub scale on the SDQ (i.e. the scores will increase). Children will also show improvement on the SDQ hyperactivity, emotional symptoms, conduct problems and peer problem subscales (i.e. scores will be lower).

Whilst it is surprising that the pro social and conduct subscales did not show significant improvements (cf. Greenberg Kushe 1996,1997; Reid 1997) on reflection it could have been anticipated that the limited dosage of the programme would have effected more change on the

hyperactivity, emotional symptoms and peer problem subscales. For example, the 'stop and think', self-control technique requiring the child to calm down and think, would presumably impact on children who are prone to be on the go and easily distracted i.e. hyperactive.

All teachers regardless of class or year group were instructed to teach the foundation lessons which consisted of the following: establishing rules, giving and receiving compliments, the 'turtle' stop and think technique and introduction to basic feelings. Children in reception (n=100) would have only completed the 12 lessons advised in the Readiness Unit. Children in year 1(n=52) would also have completed the Readiness Unit and have spent more time exploring uncomfortable and comfortable feeling words and discussing OK and not OK behaviours. The lessons on behaviours and alternative ways of managing emotions such as anger would have been delivered to older children only (which arguably would have had more of an impact on the conduct problem and prosocial subscales). In this regard the limitations of this study are twofold. Firstly the number of children within each age group is inconsistent (for example reception n= 100, year 3 n=50) consequently it is not be possible to compare differences on each subscale according to age. Secondly whilst each teacher anticipated delivering the curriculum at least once a week, the dosage in fact was never recorded. One school for example because of situational difficulties began the delivery of lessons six weeks later than other schools.

Despite the low level dosage the statistical significant improvements on the three subscales and the overall total is very promising. Again without a control group, it cannot be assumed that these changes are due to the PATHS intervention. Teachers might naturally expect children to settle down and improve as the year progresses. It is the author's experience however that as children become more familiar with each other, with their teacher and with

their classroom environment, that unless taught otherwise children are more likely to display unwanted behaviours at the end of the school year than at the beginning.

5.2.3 Hypothesis 3

The number of Teacher Concern ratings of children with 'some' or 'definite' concern will be reduced.

Methodologically, comparisons between time 1 and time 2 data was difficult, as one teacher did not complete the rating scale for a whole class. With the removal of this class for analytical purposes a Chi-squared test revealed statistically significant differences between time 1 and time 2 were only apparent for females, with the greatest improvement in the 'some concern' category.

A correlation could exist therefore between girls who fall in to the 'borderline' category on the SDQ rating scale and girls who are rated as 'some' concern on the Teacher Concern Rating Scale. Thus it would appear once again that PATHS has a positive effect on girls who fall in the 'at risk' category. This supports Greenberg's et al., (1999) and Durlak's (1995) view that universal interventions can have a significant effect on children whose behaviour has not yet become entrenched but who are 'at risk' of developing problems and additional targeted and/or individual interventions maybe necessary for children with more complex and severe problems (Offord, 1996). What is not clear is why the positive effects appear in large part to apply only to the girls.

5.2.4 Hypothesis 4

The teacher's perception of the effect of PATHS on children's emotional and behavioural will show overall improvement on the Teacher Perception Rating.

The advantage of this measure is that it specifically asked teachers to rate change as a correlation to the PATHS intervention. Thus teachers would use their professional knowledge of children's emotional and behavioural development to ascertain if they felt PATHS made any impact. This is the only measure that can realistically make the assumption that PATHS (and not other variables) has influenced the children.

Question 3 (Ability to stop and calm down when excited or upset) supports the significant findings of the hyperactivity subscale and would reflect the positive influence of the self-control or 'turtle' technique. Questions 4 (Ability to verbally label emotions of self and others) and 5 (Ability to show empathy and compassion for others' feelings) would appear to support the findings on the emotional subscale.

With the exception of question 10, the other questions reflect pro social and peer relationship behaviours. Again these findings would suggest that PATHS, according to the majority of teachers (12 out of the 13), has had a positive impact on the children and supports the view, (Reid et al.1999) that universal intervention can influence children who are at low risk and hopefully promote well being and enhance resilience (Greenberg et al., 1999). The literature review indicated a high correlation between children's self esteem and mental health, the positive response to question 10 (self esteem in relation to PATHS) is again very encouraging.

5.3 Summary

The purpose of the study was to investigate if the universal intervention of PATHS had any effect on the class teacher's perception of children's emotional and behavioural development. The quantitative measures certainly indicate (for the majority of children) positive changes post intervention and comments made by the teachers at the end of the study (Appendix 10)

also confirm that teachers have witnessed a change in children's emotional and behavioural development. However there are still unanswered questions. Does a teacher's *perception* confirm *actual* change? Is this *perceived* change a direct result of the PATHS programme? At this stage these questions remain unanswered, the following chapter however, will highlight these and other issues and offer suggestions for future research.

Chapter 6 Summary, Recommendations and Conclusion

6.1 Summary of findings

The investigation included a review of risk and resilient factors. The findings of the study seem to support the literature in that multi risk factors require multi interventions (Greenberg et al., 1999). Thus children who were 'at risk' of developing emotional and behavioural problems (namely the 'borderline' and 'some' concern categories) showed significant improvements. However, the children in the 'clinical' range and those rated by teachers as being a 'definite' concern demonstrated little or no change. This supports the wealth of existing research which suggests that universal programmes alone are insufficient for some children. Targeted and individual interventions are also required for children with more complex and severe difficulties (Offord 1996; Reid 1999; Appleton 2001; Greenberg et al., 1999).

Improvements were reported in the normal or no concern categories but these were small and not statistically significant. This would support the view that universal interventions such as PATHS are designed to have an ecological impact, which affects the whole atmosphere of the school as well as the different systems. As such the positive influences of teacher-pupil, peer-peer, teacher-teacher, parent-teacher interactions take time to impact on the child and would need a longitudinal study, to measure effectiveness (Bronfenbrenner, 1992; Weissberg & Greenberg, 1998; Appleton, 2001). A counter-argument could be that much time and resources are wasted on universal interventions which have little impact on the vast majority of children Offord (1996). This view does not coincide with those who suggest that universal interventions promote well-being and enhance resilience (Greenberg et al., Rutter 1987; Durlak 1995), the full impact of which can only be measured (if at all) over a longer period.

The specific subscales of emotional symptoms and peer relationships demonstrated statistically significant results. These findings and the improvements in children's self esteem recorded on question 10 on the TPR, could arguably be due to the teaching of emotional awareness, and emotional understanding of self and others (goals of humanistic and psychodynamic education). Additionally, the statistically significant differences reported pre and post intervention on the hyperactivity subscale and the improvements demonstrated on question 3 on the TPR would seem to indicate that teachers have taught children new strategies and skills to help them to manage their behaviours (a behaviourist approach). These findings appear to support the literature, which suggests that interventions need to be comprehensive and help alleviate both 'internalising', and 'externalising' behaviours (DfES, 2001).

6.2 Limitations of Research Methodology

- Having no matched control group, clearly influences any assumptions and interpretations of the findings (see Chapter 3 paragraph 3.6). Lack of randomisation is another important consideration; all of the schools included in the study volunteered to take part. It could be argued therefore, that teachers in these schools are not representative of teachers in general and were more motivated to succeed, however as mentioned previously it could be argued that for any intervention to be successful consideration needs to account for 'readiness for change' and 'organisational readiness' (Waxman et al., 1999).
- Whilst teacher reports in previous studies have been shown to correlate higher with the positive impact of PATHS than other measures (Greenberg 1996, Appleton 2001), parent and teacher reports together could have provided valuable information of child behaviour in their individual settings (Bronfenbrenner, 1992; Offord, Boyle & Racine, in Appleton et al., 2001). In addition, peer report and independent child observation

could produce more comprehensive and independent findings (CRRPG, 1992). However, teachers reports themselves are a good indicator of child difficulties with teacher-reported peer problems significantly predicting later difficulties (Verhulst et al., 1994).

- One other limitation of the methodology is the inconsistency of the sample. Whilst a sample size of 313 compares favourably to other PATHS studies (Greenberg & Kusche 1996, 1997), the children did not fall equally into year groups. Head teachers were asked to choose the year group and/or classes within the range from reception to year 3. As a result no two schools were similar; 'inter school' or 'inter age' comparisons were therefore difficult to make.
- The choice of the TPR as an effective tool for measuring emotional and behavioural development is questionable. It was chosen because of the author's awareness that it was originally designed to be used by the team (Fast Track 1995). However it has been impossible to obtain any information on its scoring, reliability or validity; therefore its usefulness in a more robust study would be questionable.
- Finally as a study intended for a Masters qualification the author has limited statistical experience and therefore employed minimal data analysis. As such, the findings are preliminary.

6.3 Research implications and recommendations

PATHS has proven effectiveness in research trials in America and to the author's knowledge there are no published evaluative studies of PATHS elsewhere. The findings from this small study would seem to warrant a larger more robust investigation, utilising reports of parents, peers, independent observers and teachers. As mentioned previously without a matched control the changes pre and post intervention cannot automatically be associated with PATHS. However, working in ever changing populations such as schools with innumerable

variables, and requiring an understanding of human constructs it could be argued that not only is it difficult to match variables, but in a world of unique individuals, impossible (Richardson, 1996). Also, if we assume our understanding of the world is socially constructed and is therefore contextual rather than objective, it could be that "words rather than numbers" (Miles & Huberman in McLeod, 1994 p.76) would generate more awareness and understanding. Accordingly, qualitative investigations might offer more plausible explanations and descriptions of reality and may provide more detail and depth of teacher and child experiences than has previously been recorded (ibid).

6.4 Limitations of Intervention Methodology

The authors of PATHS suggest initial training of two or three days with ongoing classroom observation, consultative meetings and telephone support. Resource difficulties in the schools meant that this level of training was not possible. Each school in the study had the same introduction to PATHS (theoretical and practical overview to all staff followed by demonstration lessons), and the offer of continued support on an 'as and when' basis. Each school was different in their request for continued support. Some schools did not initiate any further consultation or support, others requested more demonstration lessons, and others ongoing staff consultation. Further analysis might reveal correlation between amount of support and overall findings, but Greenberg and Kusche might question the quality of the delivery and therefore the success of the intervention without the initial training. Greenberg and Kusche (1994) recommend a minimum dosage of 20-30 minutes 3 times per week with ongoing modelling and 'dialoguing'. No one in the study delivered the advised amount, and the researcher did not request the teachers to undertake a diary of delivery.

6.5 Implications for counsellors/counselling

Whilst the aim of prevention work is to reduce the prevalence of mental health problems and thus reduce the need for adult services, this study clearly shows that universal prevention programmes alone cannot reduce the prevalence of children with severe difficulties. Thus it supports the continued need for individual and targeted work in addition to universal interventions. Counsellors and other mental health practitioners therefore, whether child or adult, are still required. However, the reduction in the number of children in the 'at risk' or 'borderline' category indicates that universal prevention programmes could help to prevent some children developing significant problems. Counsellors and mental health practitioners could work more closely with schools to provide a seamless menu of interventions, (individual, targeted and universal) which would help to address the complex needs of children and young people (Greenberg et al., 1999).

Whilst recent papers advocate a new role for counsellors (Thorne 2001, Dryden 2000, McLaughlin 1999), this new role would require guidance and training. How to work effectively with children and young people could be included on counselling courses and counselling theory and basic counselling skills could be taught on teacher training courses. Counsellors and mental health practitioners could be trained to use prevention programmes such as PATHS to enable them to support and work more closely with teachers. However, whilst the author received a very positive reception from schools, many writers comment on the difficulties inherent in 'outsiders' going in to schools without considerable thought and planning.

6.6 Conclusion

With a background in teaching and in counselling, the writer has an insight into the overlap between the two disciplines and how both can work together to break the cycle of dysfunction

in today's society. Traditionally teachers have not been trained in theories relating to child mental health and counsellors and other mental health practitioners do not usually go in to schools unless there is a problem. Palazzoli used the following quotation to illustrate the connection between school system and family system:

> Gregory Bateson (1979 p.87) once said, 'Consider the case of binocular vision. I compared what could be seen with one eye with what could be seen with two and noted that, in this comparison, the two-eyed method of seeing disclosed an extra dimension called depth. But the two-eyed way of seeing is itself a comparison'
> (quoted in Palazzoli, 1984 p. 307)

I use it to illustrate that having worked in two organisations namely Education and Health I have encountered many differences, however I have also found many similarities. Thus Bateson's comment supports my hope that through such a comparison more understanding might be achieved in both areas for the benefit of our children and future generations.

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APPENDIX 1

Promoting Alternative Thinking Strategies

http://www.prevention.psu.edu/PATHS/WHATIS.HTM

APPENDIX 2

Teacher Information Sheet

Teacher Information Sheet

1. **Title of study**:

An investigation into the effectiveness of a school based preventive intervention programme (PATHS) in mainstream primary schools and assessed by the class teacher.

2. **Invitation**

You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve Please take time to read the following information carefully and discuss it with your colleagues and your headteacher. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Consumers for Ethics in Research (CERES) publish a leaflet entitled 'Medical Research and You'. This leaflet gives more information about Medical Research and looks at some questions you may want to ask. A copy may be obtained from CERES, PO Box 1365, London. N16 OBW.

3. **Purpose**

- To assess the short term impact of the PATHS curriculum as delivered by class teachers in mainstream schools.

- To inform the development of the PATHS curriculum in schools across North Wales.

4. **Why has your school been chosen?**

Your school has been chosen because of your intention to deliver PATHS for part of the PSE framework. You and your colleague have been chosen because of the age range of children who are to receive the programme.

5. **Do you have to take part?**

It is up to you to decide whether or not to take part. If you decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

6. **What will happen if I take part?**

If you decide to take part a researcher will contact you in September 2001 and explain the questionnaires you are to complete.

The researcher will meet with you each half term to chat to you about the programme. You will be asked to complete 3 questionnaires in July 2002.

Two other schools will also take part in the study and we will be looking at the overall effect of PATHS on the children.

7. **What are the possible disadvantages and risks of taking part?**

Talking about feelings and behaviour raises awareness of emotional well-being in children (Greenberg, 1995) . However, as PATHS is a preventive programme that addresses the attainment targets of the Welsh Personal and Social Education Policy, it is not expected to raise extra concerns regarding disclosures by children to teachers (Flintshire Primary Care Service: 18 month report (August 1999). All teachers will routinely continue to follow their school Child Protection Policy, which address any child protection issues arising as a consequence of discussing issues raised indirectly through the programme.

Completing the questionnaires may raise awareness with the teachers and alert them to children's behaviour/emotional difficulties earlier than usual. Denbighshire Educational Psychology Department and Behaviour Support Unit are in full support of the intervention and evaluation and will be available to offer extra help to the schools. Flintshire Primary Care Service will also be available if extra support is required, and links have been established with the Emotional Health Programme Team, and CAMHS in the Conwy & Denbighshire areas.

8. **What are the possible benefits of taking part?**

Provision of early help for child behavioural problems is more beneficial then help when the child is older (Kazdin, 1987). Delivery of preventive programmes in the usual school curriculum is of benefit to all children (Offord, 1999), yet does not pose clinical dilemmas associated with 'false positives' and low pay off which is faced by specialist CAMHS teams in delivering universal interventions. An

additional potential benefit relates to CAMH service delivery, and could promote the extension of 'tier 1 and 2' interventions in the Denbighshire area (HAS, 1995).

To date there is no research into the effects of this programme or any other preventive universal school based programme in the UK. Information from this study may inspire further investigations.

The child and teachers involved in the study will have specifically addressed pro-social learning in the classroom, which is highly conducive to positive peer and teacher interaction (Bierman, 1996). Accounts from teachers and even small changes in pre and post test measures may encourage other teachers in the schools to continue with the programme.

Early identification has long term benefits to children and services (Pelligrini & Blatchford, 2000) and (Offord, 1999).

It is anticipated that the small study can be used as a pilot for a larger more comprehensive investigation of the short and long term effects of problems arising in children's emotional and behavioural development.

9. **What happens when the research study stops?**

Your school has adopted the PATHS curriculum as part of the PSE programme. It is envisaged that this will continue irrespective of the results of the evaluation, but with small changes depending on the results.

10. **Will my taking part in this study be kept confidential?**

All information which is collected about you during the course of the research will be kept strictly confidential. Any information about you which leaves the school will have your name and address removed so that you cannot be recognised from it. However, parents of the children taking part in the evaluation will be eligible to see the questionnaires completed by the class teacher.

11. **What will happen to the results of the research study?**

It is anticipated that the results will be published in October 2002. The researcher will be available to explain the results to you individually at your request.

12. **Who is organising and funding the research?**

Flintshire Primary Care Service for Children

13. **Who has reviewed the study?**

North Wales Health Authority Research Ethics Committee (Central sub-committee).

14. **Contact for further information**

Dianne Cairns

Thank you for taking the time to read this and considering whether to take part in this study.

APPENDIX 3

Teacher Consent Form

Teacher Consent Form
(To be given to teachers with Teacher Information Sheet)

Title of Study: _____

(The teacher should complete the whole of this sheet himself/herself)
(Please cross out as necessary)

Have you read the Teacher Information Sheet? .. .. YES/NO

Have you had the opportunity to ask questions and discuss this study? .. YES/NO

Have you received satisfactory answers to all of your questions? .. .. YES/NO

Have you received enough information about the study? .. .. YES/NO

Do you understand that you are free to withdraw from the study:

☐ at any time

☐ without having to give a reason

Do you agree to take part in this study? .. .. YES/NO

Signed: _____ Date_____

(NAME – in block letters) _____

Signature of Witness: _____ Date: _____

APPENDIX 4

Parent Letter

SCHOOL HEADED PAPER

Date:

Dear Parents

We are soon to be delivering the PATHS Curriculum as part of the school's requirement to teach Personal and Social Health Education. PATHS covers a variety of lessons about feelings and behaviours and all children in your child's class will receive this teaching.

In order to help us evaluate how useful the curriculum is, we will be asking classteachers to complete 3 questionnaires about all children at the beginning of the school year and at the end. You can request to see a copy of the questionnaire once the evaluation is complete. To assist us in this process, Dianne Cairns, from Flintshire Primary Care Service for Children, will be collecting and analysing the information which will be written-up as part of her Masters dissertation.

Should you change your mind about the research it will not affect your child's PSE education. If you would like to discuss any of this in more detail please contact your classteacher or Dianne Cairns

If you are unhappy about your child's teacher completing questionnaires please complete the tear off slip below.

Yours faithfully

Headteacher

I DO NOT WANT MY CHILD'S CLASSTEACHER TO COMPLETE THE QUESTIONNAIRES.

NAME OF MY CHILD .....

YR GROUP ..... ***CLASSTEACHER'S NAME*** .....

APPENDIX 5

Ethical Approval

(Is-bwyllgorau r Gorllewin y Canol a'r Dwyrain)

North Wales Health Authority Research Ethics Committee
(West, Central & East Sub-Committees)

CENTRAL SUB - COMMITTEE

All correspondence and enquiries to: Mrs. Julie Whitmore, Gweinyddwraig Etheg / Ethics Administrator at Glan Clwyd Hospital, Ystafell 1038 / Room 1038, Ysbyty Glan Clwyd, Rhyl. Denbighshire. LL18 5UJ

☎ Direct Line: 01745-534132 Ffacs / Fax: 01745 583143

Website: www.conwy-denbighshire-nhs.org.uk E-Bost/ E-Mail: Julie.Whitmore@cd-tr.wales.nhs.uk

Wednesday, 10 October 2001

Our ref: 01/72 / jw

Dr. D. Cairns,

Dear Dr. Cairns,

CONFIRMATION OF FULL ETHICS APPROVAL

Re : An investigation into the effectiveness of a school based preventive intervention programme (PATHS) in mainstream primary schools and assessed by the class teacher

Following the receipt and review of the documents relating to the above mentioned study as per our letter of 14th August, I can now confirm that the North Wales Health Authority Central Research Ethics Committee is pleased to grant full ethics approval, on condition that:

- the protocol is followed as agreed
- the project commences within 3 years of the date of this letter
- the committee is notified of all protocol amendments and serious adverse events as soon as possible
- the committee receives annual progress reports and/or a final report within 3 months of completion of the project.

Approval from host institutions must be sought separately.

The Committee reserves the right to audit local research records relating to the above study. Ethics approval is granted on this basis.

The Committee aims to be fully ICH/GCP compliant. A copy of our working constitution and a list of members are enclosed for your information.

Yours sincerely

Dr. N. P. Archard, Secretary,
NWHA Research Ethics Committee (Central)

NHS CYMRU WALES

APPENDIX 6

Strength and Difficulties Questionnaire

Strengths and Difficulties Questionnaire T^{4-16}
(To be included in first letter to parents)

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can event if you are not absolutely certain or the item seems daft! Please given your answer on the basis of the child's behaviour over the last six months or this school year.

	Not True	Somewhat True	Certainly True
Considerate of other people's feelings	☐	☐	☐
Restless, overactive, cannot stay still for long	☐	☐	☐
Often complains of headaches, stomach-aches or sickness	☐	☐	☐
Shares readily with other children (treats, toys, pencils etc)	☐	☐	☐
Often has temper tantrums or hot tempers	☐	☐	☐
Rather solitary, tends to play alone	☐	☐	☐
Generally obedient, usually does what adults request	☐	☐	☐
Many worries, often seems worried	☐	☐	☐
Helpful if someone is hurt, upset or feeling ill	☐	☐	☐
Constantly fidgeting or squirming	☐	☐	☐
Has at least one good friend	☐	☐	☐
Often fights with other children or bullies them	☐	☐	☐
Often unhappy, down-hearted or tearful	☐	☐	☐
Generally liked by other children	☐	☐	☐
Easily distracted, concentration wanders	☐	☐	☐
Nervous or clingy in new situations, easily loses confidence	☐	☐	☐
Kind to younger children	☐	☐	☐
Often lies or cheats	☐	☐	☐
Picked on or bullied by other children	☐	☐	☐
Often volunteers to help others (parents, teachers, other children)	☐	☐	☐
Thinks things out before acting	☐	☐	☐
Steals from home, school or elsewhere	☐	☐	☐
Gets on better with adults than with other children	☐	☐	☐
Many fears, easily scared	☐	☐	☐
Sees tasks through to the end, good attention span	☐	☐	☐

Do you have any other comments or concerns?

Code: _____

APPENDIX 7

Teacher Concern Rating

EXAMPLE OF TEACHER CONCERN QUESTIONNAIRE

TEACHER CONCERN QUESTIONNAIRE

Overall, are you concerned or troubled about this child's behaviour?

Please TICK one of the following boxes:

No concern ☐

Some concern ☐

Definite concern ☐

If you have indicated concern in the above boxes and would like to discuss it further, please telephone us on _____

Code: _____

APPENDIX 8

Teacher Perception Rating

	MUCH WORSE	SOMEWHAT WORSE	A LITTLE WORSE	NO CHANGE	A LITTLE IMPROVED	SOMEWHAT IMPROVED	MUCH IMPROVED
1. Ability to sound out unfamiliar words	-3	-2	-1	0	1	2	3
2. Ability to read sentences and paragraphs , and to answer questions about what they have just read	-3	-2	-1	0	1	2	3
3. Ability to stop and calm down when excited or upset	-3	-2	-1	0	1	2	3
4. Ability to verbally label emotions of self and others	-3	-2	-1	0	1	2	3
5. Ability to show empathy and compassion for others' feelings	-3	-2	-1	0	1	2	3
6. Ability to handle disagreements with others in a positive way	-3	-2	-1	0	1	2	3
7. Ability to initiate interactions and join in play with others in an appropriate and positive manner	-3	-2	-1	0	1	2	3
8. Ability to provide help, share materials, and act co-operatively with others	-3	-2	-1	0	1	2	3
9. Ability to take turns, play fair, and follow the Rules of the game	-3	-2	-1	0	1	2	3
10. Self esteem	-3	-2	-1	0	1	2	3

APPENDIX 9

Figures 1and 2

Figure 1

Total SDQ Scores

	Normal	Borderline	Clinical	Total
T1	254	33	24	311
T2	279	17	17	313
Total	533	50	41	624

Chi Analysis Total

	Observed Frequency	Expected Frequency	O-E	(O-E)2	(O-E)2/E
A	254	265.6	-11.6	134.6	0.51
B	33	24.9	8.1	65.6	2.63
C	24	20.4	3.6	13.0	0.64
D	279	267.4	11.6	134.6	0.50
E	17	25.1	-8.1	65.6	2.61
F	17	20.6	-3.6	13.0	0.63

Total = 7.52

df Value 2

Probability due to chance less than 1 %

Figure 2

Female SDQ Scores

	Normal	Borderline	Clinical	Total
T1	131	19	6	156
T2	151	4	2	157
Total	282	23	8	313

Chi Analysis - Female

	Observed Frequency	Expected Frequency	O-E	(O-E)2	(O-E)2/E
A	131	140.5	-9.5	90.3	0.64
B	19	11.5	7.5	56.3	4.89
C	6	4.0	2.0	4.0	1.00
D	151	141.5	9.5	90.3	0.64
E	4	11.5	-7.5	56.3	4.89
F	2	4.0	-2.0	4.0	1.00

Total = 13.06
df Value 2
Probability due to chance less than 1 %

Male SDQ Scores

	Normal	Borderline	Clinical	Total
T1	123	14	18	155
T2	128	13	15	156
Total	251	27	33	311

Chi Analysis - Male

	Observed Frequency	Expected Frequency	O-E	(O-E)2	(O-E)2/E
A	123	125.1	-2.1	4.4	0.04
B	14	13.5	0.5	0.3	0.02
C	18	16.4	1.6	2.6	0.16
D	128	125.9	2.1	4.4	0.04
E	13	13.5	-0.5	0.3	0.02
F	15	16.6	-1.6	2.6	0.15

Total = 0.42
df Value 2
Probability due to chance more than 10 %

APPENDIX 10

Figures 3 and 4

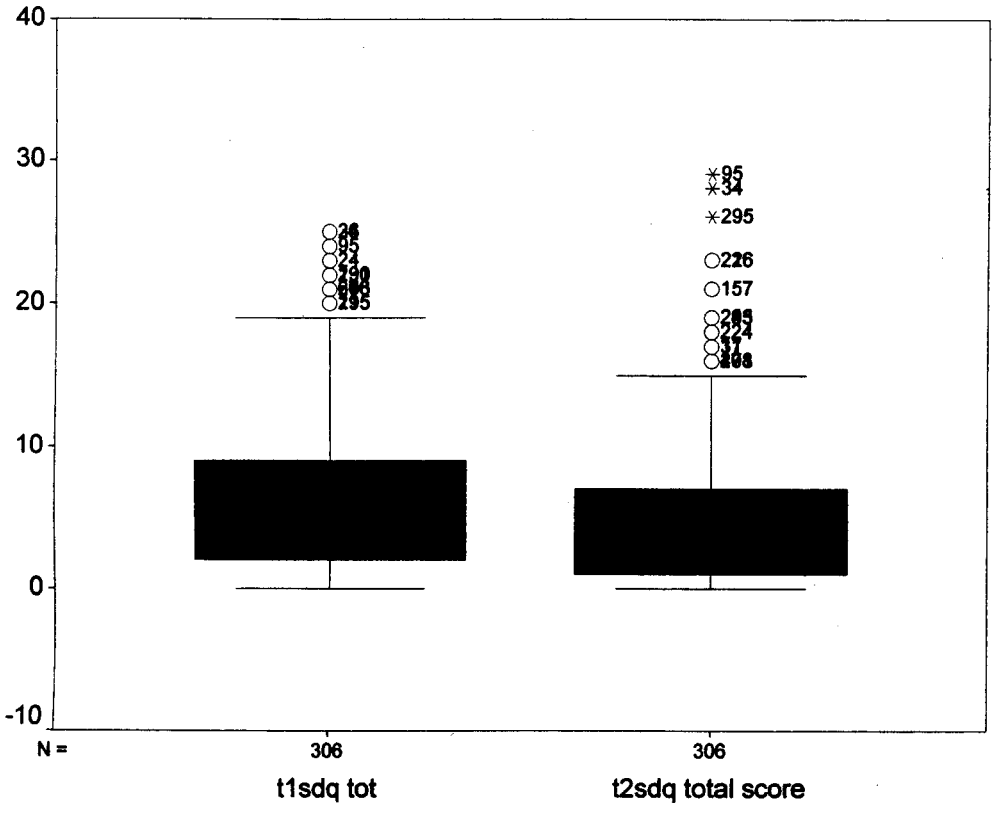

fig3

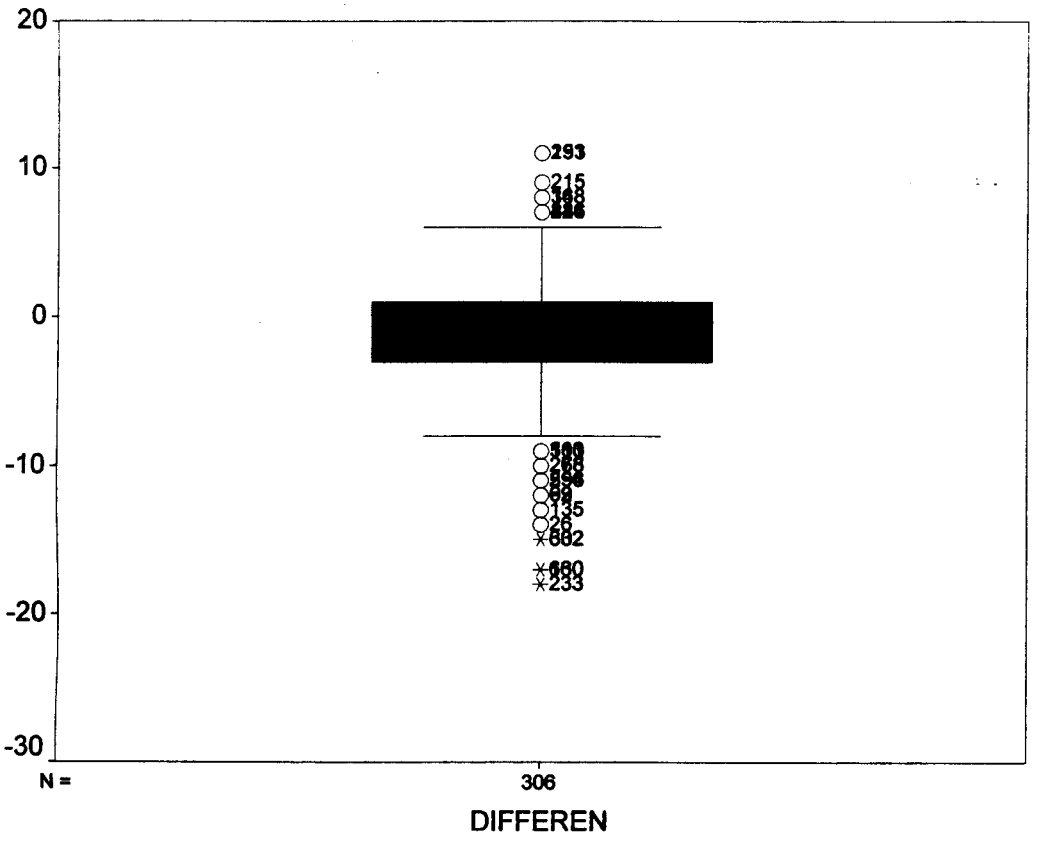

fig4

APPENDIX 11

Figures 5 and 6

Revised Concern Rating

Figure 5 **Teacher Concern**

	No Concern	Some Concern	Definite Concern	Total
T1	205	75	13	293
T2	226	52	14	292
Total	431	127	27	585

Chi Analysis - Teacher Concern

	Observed Frequency	Expected Frequency	O-E	(O-E)2	(O-E)2/E
A	205	215.9	-10.9	118.8	0.55
B	75	63.6	11.4	130.0	2.04
C	13	13.5	-0.5	0.3	0.02
D	226	215.1	10.9	118.8	0.55
E	52	63.4	-11.4	130.0	2.05
F	14	13.5	0.5	0.3	0.02
			Total =		5.23
			df		2
			Value		

Probability due to chance less than 10 %

Figure 6

Teacher Concern - Male

	No Concern	Some Concern	Definite Concern	Total
T1	98	40	9	147
T2	98	37	12	147
Total	196	77	21	294

Chi Analysis - Teacher Concern Male

	Observed	Expected	O-E	(O-E)2	(O-E)2/E
A	98	98.0	0.0	0.0	0.00
B	40	38.5	1.5	2.3	0.06
C	9	10.5	-1.5	2.3	0.21
D	98	98.0	0.0	0.0	0.00
E	37	38.5	-1.5	2.3	0.06
F	17	10.5	6.5	42.3	4.02

Total = 4.35
df 2
Value

Probability due to chance more than 10 %

Teacher Concern - Female

	No	Some	Definite	
T1	107	35	4	146
T2	128	15	2	145
Total	235	50	6	291

Chi Analysis - Teacher Concern Female

	Observed	Expected	O-E	(O-E)2	(O-E)2/E
A	107	117.9	-10.9	118.8	1.01
B	35	25.1	9.9	98.0	3.90
C	4	3.0	1.0	1.0	0.33
D	128	117.1	10.9	118.8	1.01
E	15	24.9	-9.9	98.0	3.94
F	2	3.0	-1.0	1.0	0.33

Total = 10.53
df 2
Value

Probability due to chance less than 1 %

APPENDIX 12

Comments by teachers after the intervention

Teachers' Comments

- More considerate to others
- More considerate of others feelings/willing to forgive
- Gained a great deal, personally, from it
- Children know how to calm down after dinner/playtime and how to handle disagreements with others in a positive way
- Still some children causing problems (about 3 problem children)
- The children have enjoyed the lessons but I have to keep reminding the children about PATHS all the time
- Yes, although the children have matured a year also
- The children have matured over the year and have established good relationships and a positive attitude to work and behaviour – I should imagine PATHS has contributed to this.
- They have been very forthcoming with their compliments to each other
- Pupils talk a lot about comfortable and uncomfortable feelings and we have had some super discussions
- They really enjoy doing 'Turtle'! and so do I to calm them down.
- 1 pupil who displayed some aggressive behaviour has improved greatly as a result of PATHS I feel
- Much calmer especially on carpet when listening
- Children enjoy PATHS time very much and look forward to the sessions
- This exercise has been a very rewarding experience for the whole school
- The children are much calmer and it has given strategies to the children with behaviour problems, to allow them to amend their actions.
- The children seem more tolerant of each other and are prepared to wait and see if the more volatile element in the class try to take actions to deal with their aggression, before involving staff

We feel PATHS has had a very positive effect on the whole school